

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA**

| | |
|-----------------------------------|---|
| TRINITY INDUSTRIES, INC., |) |
| TRINITY INDUSTRIES RAILCAR |) |
| CORPORATION, |) |
| |) |
| Plaintiffs, |) |
| |) |
| v. |) |
| |) |
| GREENLEASE HOLDING |) |
| COMPANY, |) |
| |) |
| Defendant. |) |

CIVIL ACTION NO. 08-1498

FINDINGS OF FACT AND CONCLUSIONS OF LAW

CONTI, Chief District Judge

I. Introduction

This action was brought by plaintiffs Trinity Industries, Inc. and Trinity Industries Railcar Corporation (together with Trinity Industries, Inc., the “Trinity plaintiffs”) seeking contribution under the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”), 42 U.S.C. § 9601 et seq. and its Pennsylvania state law counterpart, the Hazardous Sites Cleanup Act (“HSCA”), 35 PA. CONS. STAT. § 6020.101 et seq. The present dispute arises out of the contamination of real property located in Greenville, Pennsylvania, (the “North Plant”) caused by the use and release of products containing hazardous substances by Trinity Industries, Inc., defendant Greenlease Holding Company (“Greenlease”), and third parties who are not parties to this litigation. The contamination in large part occurred in connection with railcar manufacturing operations at the North Plant.

This court in an opinion dated August 5, 2014, granted in part summary judgment to the Trinity plaintiffs and held as a matter of law that Greenlease is a liable party under the CERCLA and the HSCA. (ECF No. 240 at 19; ECF No. 241.) The court explained in its opinion dated

August 5, 2014, that no opinion was expressed with respect to how the costs of remediation of the North Plant should be allocated among the parties. (ECF No. 240 (citing Litgo N.J., Inc. v. Comm'r of the New Jersey Dep't of Envtl. Prot., 725 F.3d 369, 383 (3d Cir. 2013).)

On April 20, 2015, this court commenced a bench trial with respect to the equitable allocation of response costs for the hazardous waste remediated by the Trinity plaintiffs at the North Plant. During the hearing two experts testified: Joseph B. Gormley, Jr. (“Gormley”),¹ who was called by the Trinity plaintiffs, and Steven Gerritsen (“Gerritsen”),² who was called by Greenlease. Having considered the testimony of the witnesses presented during trial and via deposition transcript, the voluminous exhibits entered as evidence, and the extensive post-trial submissions of the parties, the court in accordance with Federal Rule of Civil Procedure 52(a) makes the following findings of fact and conclusions of law with respect to the allocation of response costs for the hazardous waste remediated by the Trinity plaintiffs at the North Plant.

II. Findings of Fact (“FOF”)

The Parties

¹ Gormley previously worked for the United States Environmental Protection Agency (“EPA”) in the waste water program in the construction grants division. (T.T. 4/23/15 (ECF No. 342) at 151.) After several years with the EPA, Gormley began to work for the [S]uperfund program that was established to clean up abandoned hazardous sites across the United States. (Id.) Under the [S]uperfund program, the EPA may enter administrative directives to parties who are responsible for impacts at properties. (Id.) The process by which the EPA enforces its administrative mandates is consistent with the manner in which the Pennsylvania Department of Environmental Protection implemented the consent order and agreement in this case. (Id. at 152.)

² Gerritsen is a principal hydrogeologist II for SE Technologies in Bridgeville, Pennsylvania. (T.T. 4/24/15 (ECF No. 343) at 44.) Gerritsen has worked for SE Technologies for approximately sixteen years as a project manager of environmental projects. (Id. at 44-45.)

FOF 1. Trinity Industries Rail Car Corporation is a wholly-owned subsidiary of Trinity Industries, Inc. (ECF No. 334 at 3.) The Trinity plaintiffs are public companies and their financial information is publicly available. (T.T. 4/20/15 (ECF No. 340) at 68-9.) The Trinity plaintiffs consider themselves the leading manufacturers of railcars with manufacturing facilities across the United States and in Mexico. (*Id.*) In 2014, the Trinity plaintiffs reported an operating profit of \$1.251 billion and a net income of \$790 million. (T.T. 4/20/15 (ECF No. 340) at 69; Greenlease Ex. H.)

FOF 2. In 1910, Greenville Metal Products Company was organized for the manufacture of automotive parts. (Trinity Pls. Ex. 29 at 1.) In 1914, the corporate name of Greenville Metal Products Company was changed to Greenville Steel Car Company. (*Id.* at 2; (ECF No. 336 at 10.) Greenville Steel Car Company eventually changed its name to Greenlease Holding Company. (T.T. 4/23/15 (ECF No. 342) at 94.) The court will refer to Greenville Metal Products Company, Greenville Steel Car Company, and Greenlease Holding Company as “Greenlease.”

FOF 3. In 1910, Greenlease began its operations on an 11-acre parcel of property located at 60 Union Street, Greenville, Pennsylvania (the “North Plant”). (T.T. 4/24/15 (ECF No. 343) at 71; Trinity Pls. Ex. 1 ¶¶ C and 3(e).) Greenlease throughout its operation of the North Plant acquired additional parcels of property on which the North Plant was situated. (T.T. 4/20/15 (ECF No. 340) at 127; Greenlease Exs. KK-WW.) At the time of trial, the North Plant consisted of approximately 34 acres of property. (T.T. 4/24/15 (ECF No. 343) at 71.)

Shelby Steel Tube Company’s Ownership of the North Plant

FOF 4. Prior to the acquisition of the North Plant by Greenlease in 1910, the Shelby Steel Tube Company (“Shelby Steel”), a manufacturer of steel tubing affiliated with United States Steel Corporation, owned and operated the North Plant on the 11-acre parcel of property later

acquired by Greenlease. (T.T. 4/23/15 (ECF No. 342) at 74-75; T.T. 4/27/15 (ECF No. 344) at 16; Greenlease Exs. II-KK.) Shelby Steel operated the North Plant from at least 1898 until some point prior to Greenlease acquiring the property in 1910. (Greenlease Ex. II; T.T. 4/23/15 (ECF No. 342) at 75.)

FOF 5. The North Plant prior to its development by Shelby Steel was “a hollow with a stream running through the center axis of the property.” (T.T. 4/24/15 (ECF No. 343) at 61.) A hollow is “a stream valley, and so with the stream at the lowest point, it would be sloping towards the stream from—the stream is running north-south;....[T]he property...on both sides of the stream are sloping towards the stream.” (Id.) In other words, the easternmost and westernmost sides of the property are at a higher elevation than the stream, which was situated in the center of the property. (T.T. 4/27/15 (ECF No. 344) at 143.)

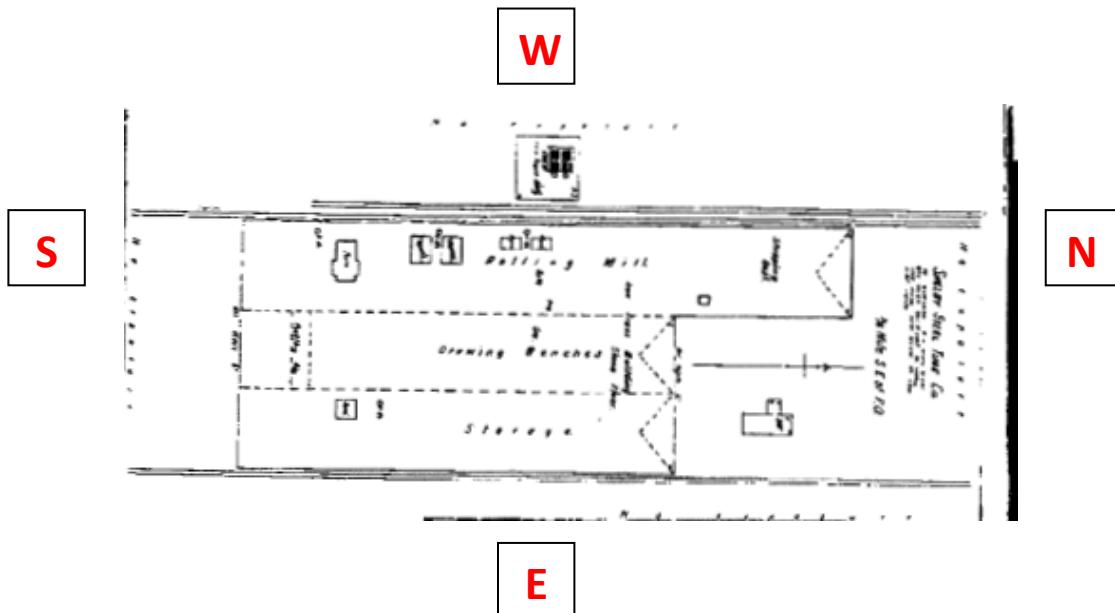
FOF 6. Part of the eastern portion of the North Plant was developed by Shelby Steel prior to Greenlease owning the site. (T.T. 4/23/15 (ECF No. 342) at 74.)

FOF 7. Shelby Steel brought historic fill to the North Plant to erect its buildings. (T.T. 4/23/15 (ECF No. 342) at 77.) Shelby Steel’s buildings are depicted on the following excerpt of a Sanborn map³ dated 1898 (“1898 Sanborn map”).

³ Both experts in this case relied upon Sanborn maps. Gormley described a Sanborn map as follows:

Insurance companies, specifically fire insurance companies, needed to map-watch facilities to determine the amount of money that they needed as a policy to replace those facilities. So they would send people out to map these sites out.

They were fairly comprehensive as far as the number, type and size of building. They included the types of building materials, brick, stone, metal, things like that because it was going to replacement value from fires.



(Trinity plaintiff's Ex. 3 at 048766 (emphasis added, i.e., the text boxes containing cardinal directions).) Each of the maps relied upon in this opinion, including the foregoing map, show the cardinal direction of "north" as the right side of the image, "east" as the bottom of the image, "south" as the left side of the image, and "west" as the top of the image. The cardinal directions are depicted above on the map, but will not be depicted on the other maps used throughout this opinion.

FOF 8. Historic fill is "a soil mixed with various non-native materials, including construction demolition debris, concrete, asphalt, or it could be industrial materials such as slag or ash." (T.T. 4/24/15 (ECF No. 343) at 59.) The composition of historic fill depends upon "where it's derived from, what process it's derived from." (*Id.*) Historic fill has a "wide spectrum

They would note major operations that were identified during the walk through [of] the site that may have an impact on fires or replacement value.

(T.T. 4/20/15 (ECF No. 340) at 93-94.) Gormley explained the Sanborn maps are reliable and accurate because "the owners at the time would want to get them right because it had a bearing on their insurance costs." (*Id.* at 94.)

of potential composition.” (Id.) Historic fill may consist of concrete, asphalt, slag, ash, coal, and a variety of other materials. (T.T. 4/27/15 (ECF No. 344) at 5-6.)

FOF 9. Historic fill is used extensively throughout Western Pennsylvania “to usually elevate grade on properties, to stabilize the ground for industrial developments. (T.T. 4/24/15 (ECF No. 343) at 60.) Gerritsen explained:

[H]istoric fill is -- fill is -- first off, it's required through the industrial development of the region. You know, the development occurred in the areas where it was accessible to transportation, along the railroads. The railroads were built along the rivers. The rivers were always built along areas where there is potential for flooding.

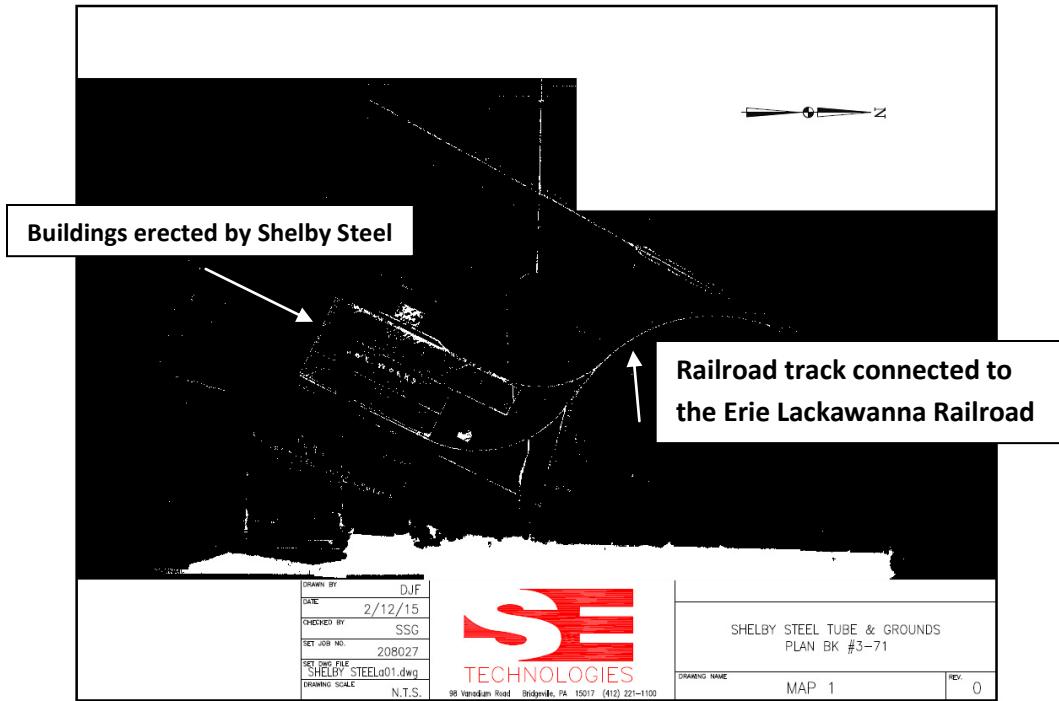
There's topography with slope, and you would have to adjust the land so that you could facilitate industrial development. You find it in this area in particular along all of the three rivers here. There's layers -- there's thirty, forty feet of fill derived from, for example, the steel-making industry that has just been prevalent throughout here through time.

And generally that's the concept, is that it's used to elevate the land surface, stabilize the land surface for industrial development.

(T.T. 4/24/16 (ECF No. 343) at 59-60.)

FOF 10. The Norfolk Southern Railway Company, formerly the Erie Lackawanna Railroad, runs along the western border of the North Plant. (Trinity pls. Ex. 16 at TRINGRNL070534; T.T. 4/23/15 (ECF No. 342) at 81; T.T. 4/27/15 (ECF No. 344) at 17; Greenlease Ex. NNN.)

FOF 11. A map of the North Plant during Shelby Steel's operations on the property depicts at least three large buildings situated closely together in the center of the property and a railroad track connected to the Erie Lackawanna Railroad, which broke off into two different railroad tracks that ran along either the west or east side of the three large buildings situated in the middle of the property. (Greenlease Ex. NNN; T.T. 4/23/15 (ECF No. 342) at 77.)

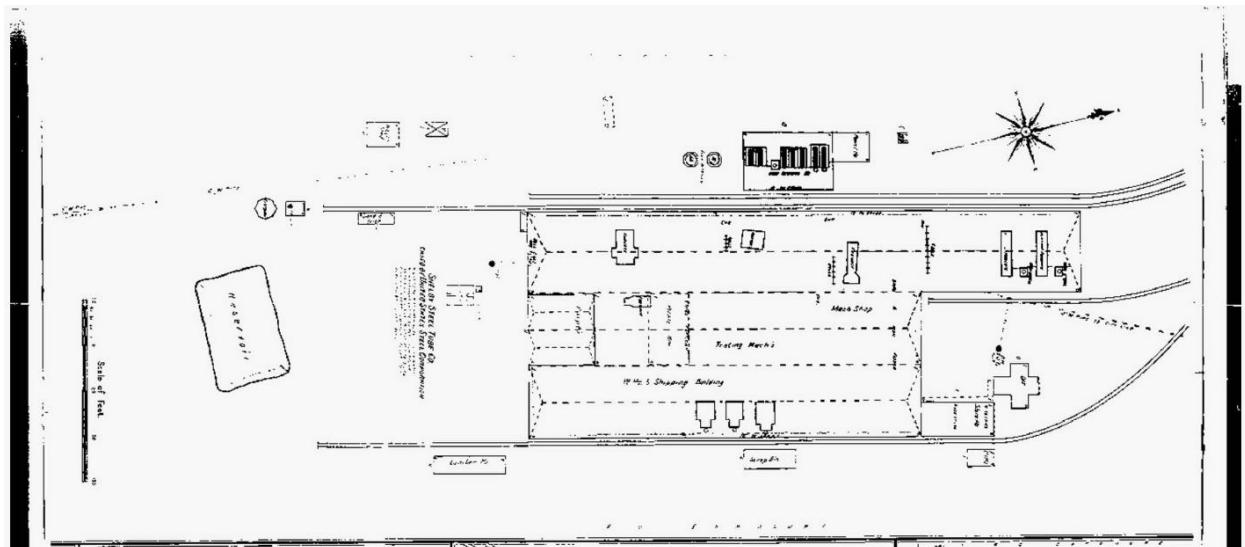


(Greenlease Ex. NNN (emphasis added, i.e., the text boxes and white arrows).)

FOF 12. There were no rail lines that ran through the buildings when Shelby Steel owned and operated the North Plant. (T.T. 4/27/15 (ECF No. 344) at 66.) There was one rail line that ran along a building on the western side of the property. (Id.)

FOF 13. Shelby Steel operated in the areas of the North Plant at which the “old Erie paint shop” and the “main paint shop” were later erected by Greenlease. (T.T. 4/23/15 (ECF No. 342) at 76.)

FOF 14. During Shelby Steel’s ownership of the North Plant, i.e., at least beginning in 1904, a reservoir existed on the southern portion of the property. (Trinity pls. Ex. 3 at TRINGRINL048767.) Shelby Steel used the reservoir as a water source. (T.T. 4/23/15 (ECF No. 342) at 80.) The reservoir is depicted on a Sanborn map dated 1904 (“1904 Sanborn map.”)

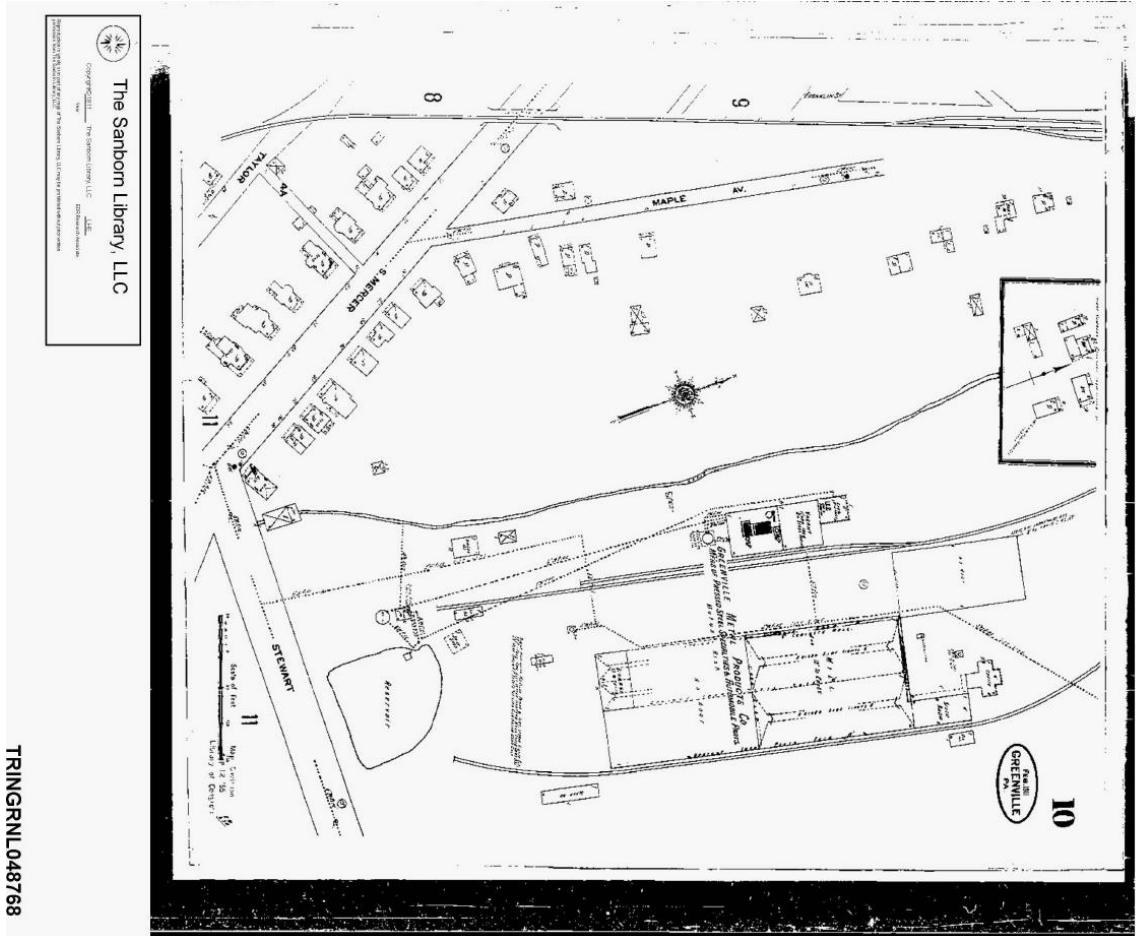


(Trinity pls. Ex. 3 at TRINGRINL048767.)

Greenlease's Expansion of the North Plant

FOF 15. From 1910 until 1914, Greenlease manufactured automotive parts at the North Plant. (Trinity Pls. Ex. 29 at 1-2.) Greenlease's business began "with the production of front and rear axle, spindles, jack shaft, [and] drop forgings." (*Id.* at 1.)

FOF 16. By 1911, there were residential structures situated on property, which eventually became the westernmost side of the North Plant. (T.T. 4/24/15 (ECF No. 343) at 79; Greenlease Ex. VV at 2.) In 1911, Greenlease at that time did not own those residential structures. (*Id.*) The Sanborn map dated 1911 ("1911 Sanborn map") depicted below shows the residential structures on the western side of the stream that ran through north to south in the center of the property on which the North Plant was developed. (Trinity pls. Ex. 3 at TRINGRNL048768.)



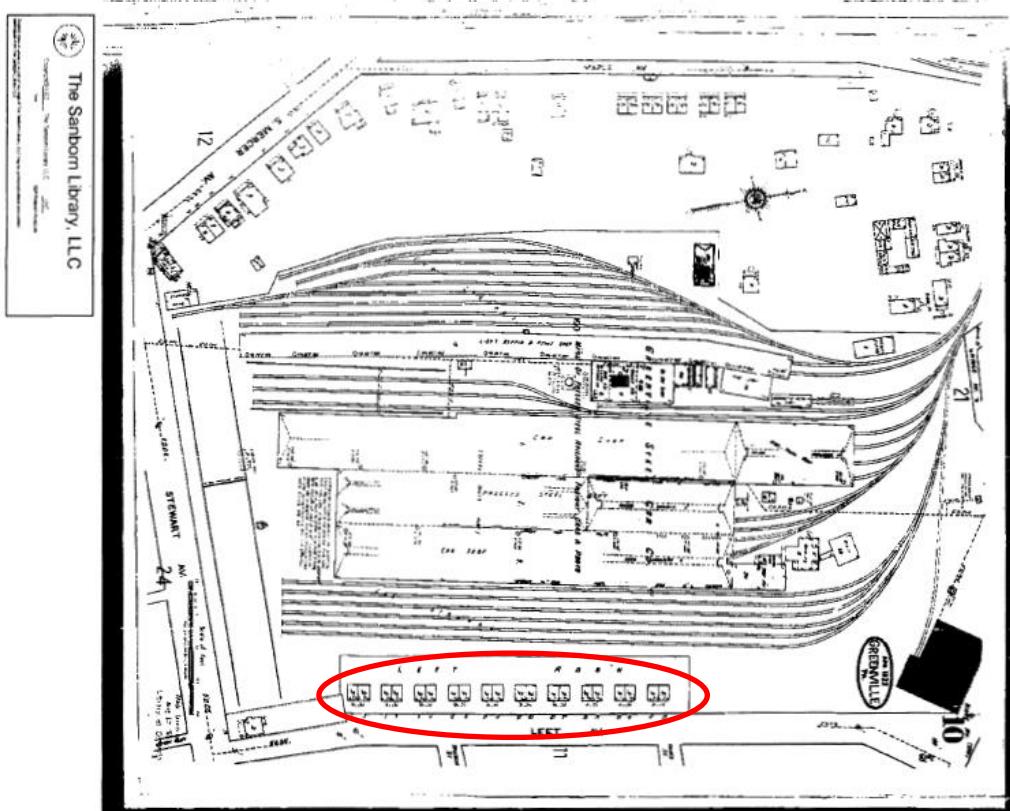
(Trinity pls. Ex. 3 at TRINGRNL048768.)

FOF 17. By 1916, Greenlease's operations included repairing, rebuilding, and manufacturing railcars for railroads. (Trinity Pls. Ex. 29 at 2; T.T. 4/27/15 (ECF No. 344) at 47.)

FOF 18. Between 1911 and 1922, Greenlease expanded the property on which the North Plant is situated. (T.T. 4/27/15 (ECF No. 344) at 47.) Greenlease's expansion of the North Plant included an expansion of the geographic area on which the production facilities were situated. (Id.) Greenlease during the expansion placed historic fill at the North Plant. (Id. at 48.)

FOF 19. Between 1911 and 1922, Greenlease constructed twenty structures on the eastern side of the North Plant above Leet Avenue. (T.T. 4/27/15 (ECF No. 344) at 64; Trinity

Pls. Ex. 22 at TRINGRNL053058.) Those twenty structures are depicted in a Sanborn map dated 1922 (“1922 Sanborn map”).

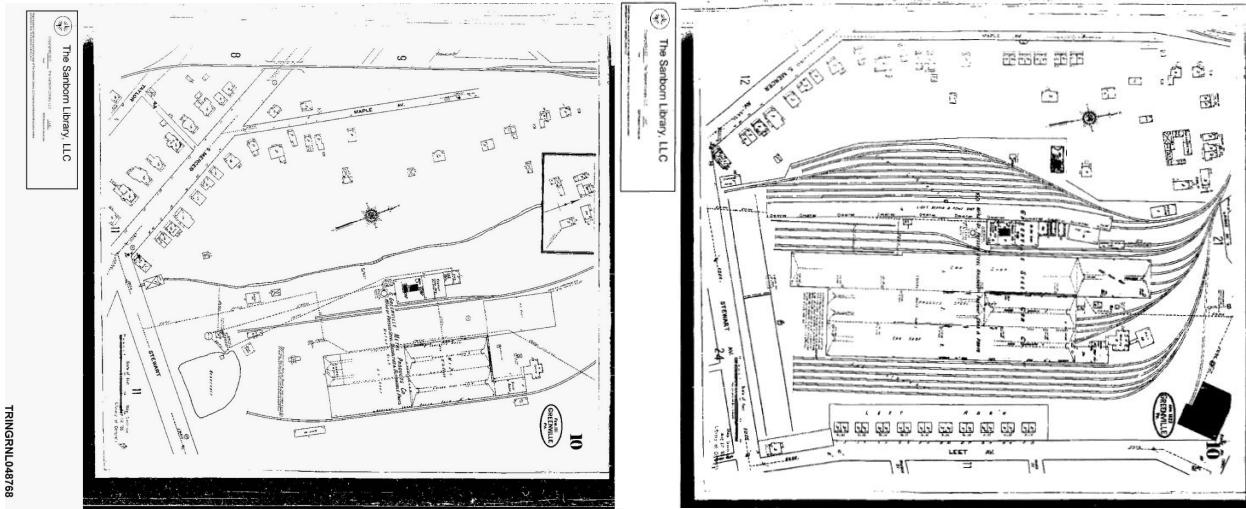


(Trinity pls. Ex. 3 at TRINGRNL048769 (emphasis added, i.e., the red oval on the eastern portion of the map).)

FOF 20. Gerritsen testified that if Greenlease owned the property on which those twenty structures are situated at the time the structures were constructed, Greenlease placed historic fill in that area to build those structures. (T.T. 4/27/15 (ECF No. 344) at 64.)

FOF 21. By 1922, the hollow in which the North Plant was developed was filled. T.T. 4/27/15 (ECF No. 344) at 67.)

FOF 22. A comparison of the 1911 Sanborn map of the North Plant with the 1922 Sanborn map of the North Plant shows the extent of Greenlease’s expansion of the North Plant.



1911

1922

(Trinity pls. Ex. 3 at TRINGRNL048768; (Trinity pls. Ex. 3 at TRINGRNL048769.)

FOF 23. The 1922 Sanborn map depicts two large rectangular structures on the southern portion of the North Plant. (Trinity Pls. Ex. 22 at TRINGRNL053058.) Gerritsen testified that “if fill was required in order to construct those [buildings]” it would have been placed by Greenlease. (T.T. 4/27/15 (ECF No. 344) at 65.)

FOF 24. The 1922 Sanborn map does not depict the reservoir on the southern portion of the North Plant; rather, the 1922 Sanborn map depicts buildings erected where the reservoir used to be. (Trinity pls. Ex. 3 at TRINGRNL048769.)

FOF 25. The 1922 Sanborn map does not depict the stream that is depicted in the 1911 Sanborn map; rather, the 1911 Sanborn map depicts in the area in which the stream used to be a building labeled “Light & Repair Shop” and a railyard, i.e., a series of railroad tracks running north to south on the property. (Trinity pls. Ex. 3 at TRINGRNL048769.)

Greenlease's Operations at the North Plant

FOF 26. Greenlease operated two paint shops at the North Plant, i.e., the “old Erie paint shop” and the “main paint shop,” which was also known as the “central paint shop.” (ECF No. 328 at 28-29.) The old Erie paint shop and the central paint shop had “mostly dirt [floors].” (T.T. 4/20/15 (ECF No. 340) at 16.)

FOF 27. The Trinity plaintiffs presented testimony from former employees of Greenlease describing Greenlease’s painting practices at the North Plant. (T.T. 4/20/15 (ECF No. 340) at 14; ECF Nos. 327; 328; 330; 332; 333.)

FOF 28. Raymond Fell (“Fell”),⁴ an employee of Greenville Steel Car Company from July 1963 until 1985, worked in the old Erie paint shop and main paint shop. (T.T. 4/20/15 (ECF No. 340) at 14.) Fell first cleaned cars and then became a painter. (Id.) His entire career with Greenville Steel Car Company was in the paint area. (Id.)

FOF 29. The first step in the painting process used by Greenlease in the old Erie paint shop and the main paint shop was to hose the railcar down with naphtha to remove the

⁴ Greenlease objected to Fell’s testimony as cumulative. (ECF No. 340 at 12.) Federal Rule of Evidence 403 provides that “[t]he court may exclude relevant evidence if its probative value is substantially outweighed by a danger of...needlessly presenting cumulative evidence.” FED. R. EVID. 403. This court has broad discretion to decide whether evidence should be excluded as cumulative under Rule 403. United States. v. Cunningham, 694 F.3d 372, 388 (3d Cir. 2012). Fell’s testimony sets forth in detail the step-by-step process used by Greenlease employees to clean and paint railcars in the old Erie paint shop and the main paint shop. The parties designated various portions of the depositions of at least seven other former employees of Greenlease that describe Greenlease’s use of paints and solvents at the North Plant. Fell’s testimony, however, is particularly helpful to the court because of the length of time Fell spent working at the North Plant and the testimony provides a detailed description of each step in the process of cleaning and painting the railcars at the North Plant; indeed, Greenlease cites to and relies upon Fell’s testimony in its proposed findings of fact and conclusions of law. (ECF No. 346 ¶¶ 12-13.) Under those circumstances, the court finds that the probative value of Fell’s testimony outweighs the danger of needlessly presenting cumulative evidence.

grease off of the steel. The second step was to wipe the car with rags. Both steps were performed on a dirt area. “Drippage” from this process would fall onto the ground. (T.T. 4/20/15 (ECF No. 340) at 17; ECF No. 326 at 27, 29, 30.) Xylene—a chemical used to remove grease and paint—was used during this process as a spray to clean the spray gun and thin paint. (T.T. 4/20/15 (ECF No. 340) at 17.)

FOF 30. Fell wore coveralls and a “ball cap” while performing the painting process. (T.T. 4/20/15 (ECF No. 340) at 17.) Paint would get on his clothes during the painting process. (Id. at 18.) He did not have a covering on his face. (Id. at 17.) Paint would get on Fell’s face during the painting process. Fell put Vaseline on his face when he painted so that he “could take a rag and wipe the paint back off” his face. In other words, the Vaseline prevented the paint from sticking to his forehead and face. (Id.)

FOF 31. Fell worked nearby the location where the shot blasting occurred, which was used to “take the lamination out of the steel and whatever PCBs from the oil that would be on there.” (T.T. 4/20/15 (ECF No. 340) at 18.) During the shot blasting process, tiny BBs were used to remove mill scale and rust from railcars to prepare the railcars to be painted. (T.T. 4/20/2015 (ECF No. 316) at 62.)

FOF 32. Fires occurred in the area in which Fell worked. (T.T. 4/20/15 (ECF No. 340) at 19.) He testified that “when we would wash them cars down with naptha, it would run onto the ground, and then you started to sand those cars down with a sander, and some of the sparks would set the ground on fire.” (Id.) Fell testified the fires occurred “maybe once, twice a week.” (Id.) Fell put out the fires with fire extinguishers. (Id.)

FOF 33. Fell described a process called “undercoating” as follows: “[w]hen you got done cleaning the car, move it down to the next position, it called for undercoating. We would do

the undercoating on it with—it's like a tar base. And the one that comes into my mind mainly was a thin film was the name of it. And I got my eyes burnt from that stuff." (T.T. 4/20/15 (ECF No. 340) at 20.) Fell had to wear patches on his eyes and miss work for a week as a result of the tar base burning his eyes. (Id.) Tar would also get onto Fell's clothing. (Id.)

FOF 34. Fell primed the cars with lead primer. (T.T. 4/20/15 (ECF No. 340) at 20.) Fell remembered using lead primers in 55-gallon containers from the following brands: DuPont, PPG, Sherwin Williams, and Jamestown Paint. (Id. at 21.) Fell described the procedure used to fill his spray gun with the lead primer as follows:

Well, when you took the lid of that drum, we had like a board to stir up the paint so it was mixed up real good. And you set your pump in there, your paint pump, set that in that barrel. And then you would pull the trigger on the gun and run all the thinner out [onto the dirt floor] until the paint started coming.

(T.T. 4/20/15 (ECF No. 340) at 21.) In other words, Fell with a high pressure spray gun sprayed solvent onto the ground. (Id. at 22.) When the paint began to come out of the spray gun, Fell turned on the air and started spraying the car with the lead primer. (Id.) Another person would be doing the same task on the other side of the car. (Id.) Fell used a ladder to paint the top of the cars. (Id.) Primer would get onto Fell's shoes and clothes. (Id.) When Fell removed his clothes at the end of a work day, they were so "stiff" that they could "stand alone" "like somebody standing there in the corner if you left it there." (Id. at 23.)

FOF 35. After the priming stage of the painting process was completed, Fell "[p]ull[ed] the car out of the transfer table, [took] it over and [took] it off [sic] on the next track to the finish position." (T.T. 4/20/15 (ECF No. 340) at 25.) The cars were painted in the "finish position." (Id.)

FOF 36. Fell described the process of filling his spray gun with the paint as follows:

Put the pump in the—take the lid off that finish paint barrel, put the pump in, run the thinner out onto the ground until the paint came through, and turn your air on and go up—start at the top and finish. Start spraying.

(T.T. 4/20/15 (ECF No. 340) at 14.) Fell would start at the top and work toward the bottom.

Another person would be painting the car on the other side of the car. (Id.)

FOF 37. Fell explained that he had to clean his spray gun because different paint colors were used for different railroad cars. (T.T. 4/20/15 (ECF No. 340) at 25-26.) He explained the process of cleaning his spray gun as follows:

Well, we had a bucket of thinner there. Usually you'd pull the pump out of the paint barrel, stick it in that five-gallon bucket of thinner, and spray—run that out onto the ground.

And sometimes if you wanted the paint, you'd run it into an empty five-gallon bucket or whatever you had there. At the end of the order, if you got a pass from your general foreman, you could take that home.

...
And you'd run that paint [onto the ground] until the thinner come out clear, and then take the paint and put it into another barrel.

(T.T. 4/20/15 (ECF No. 340) at 27.)

FOF 38. After painting, the next step in the process was stenciling. (T.T. 4/20/15 (ECF No. 340) at 27.) Fell explained:

That's where they put the lettering on the cars, and they had a table there where they—when the stencil position took care of their stencils, they'd wash and clean them on a table like.

(T.T. 4/20/15 (ECF No. 340) at 27.) This process occurred every day and sometimes twice or three times per day. (Id. at 27-28.)

FOF 39. The last step of the painting process involved the car being transported from the paint shop to the shipping track, where it would be picked up by its railroad owner or shipped to its railroad owner. (T.T. 4/20/15 (ECF No. 340)

FOF 40. Fell explained the process for cleaning the dirt floors at the North Plant as follows:

On weekends we would take shovels and rakes and clean that up and put it in barrels and have a telehandler come and take the barrels, and I don't know where he took them. But yes, we raked that up and cleaned it up with our rakes and shovels.

(T.T. 4/20/15 (ECF No. 340) at 37.)

FOF 41. Fell recalled taking a blood test for lead concentrations. (T.T. 4/20/15 (ECF No. 340) at 29.) Fell was told that if the concentrations of lead in his blood were "too high" he would have to do a job other than painting. (Id.) Fell could not recall the results of his blood test and he was never required to do another job other than painting. (Id.)

FOF 42. An internal memorandum from Greenlease dated October 7, 1976, provided:

Painting operations are by the air spray method, without benefit of mechanical ventilation necessary to remove flammable vapors, mists, etc. The paint is sprayed onto the cars in the open atmosphere of the buildings and collects on employees, structures, lights, electrical controls, etc., within the buildings and automobiles, houses, etc., outside of the buildings. The paint accumulated within the buildings is a continuing fire hazard. The frequencies of fires have increased in recent years. Also without heated work stations or buildings, winter weather painting conditions creates excessive repainting of freight cars.

(Trinity pls. Ex. 41 at 2.)

Greenlease's Sale of the North Plant to Trinity Industries, Inc.

FOF 43. Trinity Industries, Inc. purchased the North Plant from Greenlease in an asset sale, pursuant to a Purchase and Sale Agreement dated December 9, 1986 (the "purchase

and sale agreement"). (T.T. 4/20/15 (ECF No. 316) at 57, 60; T.T. 4/23/15 (ECF No. 342) at 88; Trinity pls. Ex. 67.)

FOF 44. Pursuant to the purchase and sale agreement, the purchase price of the North Plant's "subject assets other than the inventory" was \$8,000,000. (Trinity Pls. Ex. 67 at TRINGRNL032315; T.T. 4/23/15 (ECF No. 342) at 88.)

FOF 45. The purchase price of the North Plant's inventory pursuant to the purchase and sale agreement was \$6,075,120. (Trinity Pls. Ex. 67 at TRINGRNL032316; T.T. 4/23/15 (ECF No. 342) at 88.)

FOF 46. Section 2.02 of the purchase and sale agreement, in pertinent part, provided:

Purchase Price for the Inventory. Section 1A of the Disclosure Schedule sets forth a statement of the physical inventory (the "inventory"), taken and conducted by Seller as of November 11, 1986 and approved by Purchaser, of Seller's raw materials, work-in-process and finished goods inventories (specifically excluding rail cars and certain other assets set forth in Section 2 of the Disclosure Schedule), together with the book value of the Inventory as of November 11, 1986.

(Trinity pls. Ex. 27 at 4.) Greenlease's sale of the North Plant to Trinity Industries, Inc. was subject to a post-closing adjustment to reflect the amount and book value of inventory "disposed of" between November 11, 1986, and the closing date. (*Id.* at 7.)

FOF 47. Greenlease's balance sheet as of December 31, 1985, reflected that:

- the book value of its assets at the end of 1985 were \$75,608,000 (Trinity Pls. Ex. G at GHC0005964; T.T. 4/23/15 (ECF No. 342) at 89);
- the book value of its inventory accounted for \$14,635,000 of those assets (Trinity Pls. Ex. G at GHC0005964; T.T. 4/23/15 (ECF No. 342) at 90); and
- the book value of its property, plant, and equipment accounted for \$10,364,000 of those assets (Trinity Pls. Ex. G at GHC0005964; T.T. 4/23/15 (ECF No. 342) at 90).

FOF 48. Greenlease operated the North Plant until December 9, 1986. (T.T. 4/23/15 (ECF No. 342) at 106.)

FOF 49. As of December 9, 1986—the date of the purchase and sale agreement—Greenlease had operated the North Plant as an industrial facility “for some period of time.” (T.T. 4/23/15 (ECF No. 342) at 90.)

FOF 50. Section 3.10 of the purchase and sale agreement, entitled “Compliance with Laws” (the “compliance with laws clause”), provides:

Compliance with Laws. Seller has complied, in all material respects, with all applicable laws and regulations (including, but not limited to, the Occupational Safety and health Act and the Equal Employment Opportunity Act), and all building, zoning and other laws affecting the business or operations of Greenville Facility or the Subject Assets; **provided, however, that Seller makes no representation or warranty regarding compliance with the Environmental Protection Act, any other environmental laws or regulations or any hazardous waste laws or regulations (collectively, “Environmental Laws”).**

(Trinity pls. Ex. 67 at TRINGRNL032327 (emphasis added); T.T. 4/23/15 (ECF No. 342) at 91.) The bolded and italicized portion of the compliance with laws clause was “a very common clause” used by Greenlease’s parent corporation, Ampco-Pittsburgh Corporation (“Ampco”), or its subsidiaries when they sold their assets. (T.T. 4/23/15 (ECF No. 342) at 91.)

FOF 51. Rose Hoover (“Hoover”) is executive vice-president and chief administrative officer for Ampco. (T.T. 4/23/15 (ECF No. 342) at 85.) Hoover is also an officer and director of Greenlease. (Id. at 87.)

FOF 52. Hoover worked for Ampco for approximately 37 years. (T.T. 4/23/15 (ECF No. 342) at 85.) She began working for Ampco as a secretary in the legal department when she was 24 years old. (Id. at 86.)

FOF 53. Hoover for the past 36 years was involved in every acquisition or divestiture by Ampco. (T.T. 4/23/15 (ECF No. 342) at 86.) Ampco as a public parent holding company does acquisitions and divestitures “fairly regular[ly].” (Id. at 86-87.)

FOF 54. Hoover was in the seventh year of her employment with Ampco when the Trinity plaintiffs purchased the North Plant from Greenlease. (T.T. 4/23/15 (ECF No. 342) at 87.) Hoover worked behind the scenes of the purchase and sale of the North Plant from Greenlease to Trinity Industries, Inc. (Id.) Hoover did not negotiate the purchase and sale of the North Plant between the Trinity Industries, Inc. and Greenlease. (Id.) Hoover worked on the schedules and documents with respect to that deal. (Id.)

FOF 55. Hoover testified that the purpose of the compliance with laws clause was to achieve an “as is where is” sale of the property. (T.T. 4/23/15 (ECF No. 342) at 91.) Hoover, however, could not locate in the purchase and sale agreement the phrase “as is where is.” (Id. at 99.)

FOF 56. Section 9.01 of the purchase and sale agreement, entitled “Indemnity of Seller” (the “indemnity of seller clause”), provided, in pertinent part:

Indemnity of Seller. Seller agrees to indemnify and hold harmless Purchaser against any loss, liability, claim, damage, cost or expense, including attorneys’ fees (collectively the “Damages”), resulting from or arising out of any of the following:

...
(d) Any obligation, debt or liability of Seller, direct or contingent, known or unknown, which arose, existed or accrued on or prior to the date of Closing, to the extent not expressly assumed herein by Purchaser[.]

(Trinity pls. Ex. 67 at TRINGRNL032346-47; T.T. 4/23/15 (ECF No. 342) at 101.) The indemnity of seller clause expired three years after the date of the purchase and sale agreement. (T.T. 4/23/15 (ECF No. 342) at 101.)

FOF 57. Section 9.03 of the purchase and sale agreement, entitled “Indemnity for Certain Laws” (the “indemnity clause”), provided, among other things, that:

It is the intention of the parties that liability under this Section for any condition that is caused by the acts of Seller or its predecessors in title to the assets prior to the date of the Closing and by the acts of Purchase or its successors in title to the assets after the date of Closing shall be allocated between the parties in a just manner taking into account degree of fault, period of violation and other relevant factors.

(Trinity pls. Ex. 67 at TRINGRNL032350; T.T. 4/23/15 (ECF No. 342) at 92.) The indemnity clause was frequently used by Ampco when it sold its assets, i.e., it was used “in more deals than not.” (T.T. 4/23/15 (ECF No. 342) at 92.) Hoover explained the import of the indemnity clause as follows:

Because the purchaser of the business was going to conduct the same operation as we conducted, as Greenville Steel Car Company conducted prior to the date of close, you had to work in a mechanism where if you found environmental contamination that could only be caused by us prior to close, we would take care of it and indemnify the buyer.

If environmental contamination was found that could be shown that purchaser caused the environmental contamination after close, they would indemnify us. If it was -- based on reading this paragraph, if it was contamination caused by both buyer and seller, you had to determine an equitable means to share the cost of that contamination.

...
So if it was all on Ampco's watch or Greenlease's watch, it was Greenlease's. If it was all on Trinity's watch, it would have been Trinity's; and if it spanned both, it would have been allocated between the two.

(T.T. 4/23/15 (ECF No. 342) at 92-93.)

FOF 58. Section 9.04 of the purchase and sale agreement, entitled “Survival” (the “survival clause”), provided:

Survival. Each of the foregoing indemnities shall survive and continue in force after the transfer of the Subject Assets to Purchaser for a period ending on the third anniversary of the date of the Closing; provided, however, that (i) the foregoing limitation shall not apply to any Circumstance for which the party

seeking indemnification has given notice to the Indemnifying Party pursuant to Section 9.05 prior to the third anniversary of the date of the Closing and (ii) the indemnification referred to in Section 9.01(c) hereof shall survive until the applicable statutes of limitations shall expire.

(Trinity pls. Ex. 67 at TRINGRNL032350 (emphasis in original); T.T. 4/23/15 (ECF No. 342) at 92.) Hoover explained the import of the survival clause as follows:

It was very common in these deals, and it was the case in this deal, that you picked a period of time for the buyer of the property to find something. And the indemnities usually lasted for two, three, four years, whatever the parties negotiated, in this case three years.

(T.T. 4/23/15 (ECF No. 342) at 93.) Hoover explained that—based upon the survival clause—if the Trinity plaintiffs discovered a liability attributable to Greenlease four, five, or twenty years after the closing, Greenlease “would not have an indemnification obligation to the buyer of the property.” (Id. at 93-94.)

Greenlease Assets Following the Sale of the North Plant to Trinity

FOF 59. Greenlease did not have any employees or operations after it sold the North Plant to Trinity Industries, Inc. (T.T. 4/23/15 (ECF No. 342) at 94.) Greenlease at the time of trial did not have any employees. (Id.)

FOF 60. Greenlease’s assets at the end of 1987 totaled \$51,016,009. (Greenlease Ex. G at GHC0005963; T.T. 4/23/15 (ECF No. 342) at 93.)

FOF 61. Greenlease’s assets at the end of 1988 totaled \$48,125,380. (Greenlease Ex. G at GHC0005963; T.T. 4/23/15 (ECF No. 342) at 93.)

FOF 62. Greenlease’s assets at the end of 1989 totaled \$14,396,842. (Greenlease Ex. G at GHC0005963; T.T. 4/23/15 (ECF No. 342) at 93.)

FOF 63. Greenlease’s assets at the end of 1990 totaled \$658,594. (Greenlease Ex. G at GHC0005963; T.T. 4/23/15 (ECF No. 342) at 93.)

FOF 64. Hoover explained that it was very common for Ampco that once an indemnification period for one of its deals was over, it “would clean up the balance sheet post the indemnification period and clean it up and dividend out however you get the remaining items on the balance sheet out of that entity.” (T.T. 4/23/15 (ECF No. 342) at 95.)

FOF 65. In 2008, Greenlease had an environmental reserve of \$150,000. (Greenlease Ex. G at GHC0005963; T.T. 4/23/15 (ECF No. 342) at 95.) In 2009, Greenlease had an environmental reserve of \$282,500. (Greenlease Ex. G at GHC0005963; T.T. 4/23/15 (ECF No. 342) at 95.) Hoover put the environmental reserve “on the books when [Greenlease and Ampco] were sued by Trinity.” (T.T. 4/23/15 (ECF No. 342) at 95.)

FOF 66. As of April 23, 2015, there was \$92,000 in assets left in Greenlease’s estate. (T.T. 4/23/15 (ECF No. 342) at 95-96.) Greenlease used a portion of the \$650,089 it recorded in 1990 to pay for legal fees accrued because of this lawsuit. (Id. at 96.)

FOF 67. Ampco and Greenlease “put all relevant insurance carriers on notice” with respect to this lawsuit. (T.T. 4/23/15 (ECF No. 342) at 96.) Two relevant insurance carriers “reserved their rights,” which means they “[m]ade note of the claim and reserved their rights to rule on coverage at a later point in time once more information [is] known.” (Id. at 96, 126.) None of the relevant insurance carriers agreed to provide coverage to Greenlease with respect to this lawsuit. (Id. at 96.) One or two of the relevant insurance carriers offered Greenlease a defense in this case. (Id. at 127.) Hoover believed Greenlease accepted the defense offered to them. (Id.) Neither Ampco nor Greenlease were reimbursed for its legal costs with respect to this case. (Id.)

FOF 68. Hoover does not have knowledge about the total face value of any of Greenlease's relevant insurance policies with respect to this case. T.T. 4/23/15 (ECF No. 342) at 129.)

FOF 69. Ampco had attorneys "who have worked with [Hoover] to try to obtain the [insurance] coverage that [Greenlease] seek[s] with respect to this [case]." (T.T. 4/23/15 (ECF No. 342) at 116, 133.) Hoover testified that with respect to investigating possible insurance coverage for Greenlease related to this case, she took the following actions:

I did a document search. I provided my counsel with all evidence of coverage policies and anecdotal evidence and turned that over to them. They as part of their services to me handled that aspect of this litigation.

(T.T. 4/23/15 (ECF No. 342) at 136.)

Trinity Industries, Inc.'s Operations at the North Plant

FOF 70. After Trinity Industries, Inc. acquired the North Plant from Greenlease in 1986, it manufactured railcars at the property, which included, among other things, cleaning the railcars, painting the railcars, and using solvents. (ECF No. 328 at 8, 13-14; ECF No. 333 at 21-22; ECF No. 330 at 21; Trinity pls. Ex. 1 ¶ E.)

FOF 71. Fell continued to work at the North Plant once it was acquired by Trinity Industries, Inc.. (T.T. 4/20/15 (ECF No. 340) at 31-32.) Fell worked at the North Plant for Trinity Industries, Inc. until 1999. (Id.)

FOF 72. There was a brief period of time during Trinity Industries, Inc.'s operation of the North Plant that Trinity Industries, Inc. engaged in painting operations on dirt floors, i.e., prior to Trinity Industries, Inc. concreting the floors in the paint shops. (T.T. 4/20/15 (ECF No. 340) at 40.) During that time, spent solvents were allowed to run down the sides of the railcars and onto the dirt floors. (ECF No. 326 at 27, 29.)

FOF 73. Trinity Industries, Inc. concreted the floors at the North Plant where the painting and shot blasting occurred within the first two years of operating the North Plant, and installed three paint booths. (T.T. 4/20/15 (ECF No. 340) at 32, 34, 36-37, 60; T.T. 4/21/2015 (ECF No. 341) at 74.)

FOF 74. Fell explained Trinity Industries, Inc.'s use of tar paper as follows:

Whenever an order started, before we done anything, each position, you rolled tar paper down on the floor—on the concrete on your position where you were working. And then at the end of that order, you rolled that all up and put it in a dumpster.

(T.T. 4/20/15 (ECF No. 340) at 32.) The purpose of putting down tar paper was to keep the paint off the concrete floor. (Id.)

FOF 75. The three paint booths installed or improved by the Trinity Industries, Inc. at the North Plant were fully enclosed booths. (T.T. 4/20/2015 (ECF No. 316) at 60-61; T.T. 4/21/2015 (ECF No. 341) at 74.) The floors and walls of the booths were protected from overspray build-up. (T.T. 4/20/2015 (ECF No. 316) at 61.) With respect to the floors of the paint booths installed or improved by Trinity Industries, Inc., tarpaper or roofing paper was used on the floors of the paint booths. When overspray occurred within a paint booth and built up on the tarpaper or roofing paper, the tarpaper or roofing paper was rolled up and disposed of in a landfill. (T.T. 4/20/2015 (ECF No. 316) at 60.) With respect to the walls of the paint booths installed or improved by Trinity Industries, Inc., a peel coat was sprayed onto the sides of the paint booths. Once overspray accrued onto the sides of the paint booth, the peel coat was easily removed from the inside of the paint booth. (Id. at 61.)

FOF 76. Trinity Industries, Inc. installed and improved the paint booths at the North Plant, used tarpaper or roofing paper on the floors, and sprayed peel coat on the walls to

control the process and limit emissions to the environment. (T.T. 4/20/2015 (ECF No. 316) at 61.)

FOF 77. Fell testified that Trinity Industries, Inc. made the North Plant a safer place to work. (T.T. 4/20/15 (ECF No. 340) at 32.) Trinity Industries, Inc. provided Fell with a hard hat and a face shield. (Id. at 32-33.)

FOF 78. Trinity Industries, Inc. performed touch-up work on the railcars in an outbound area on dirt floors. (ECF 326 at 16.) The touch-up work was performed mostly with a paint brush, but occasionally or “very little” with a spray gun. (Id.)

FOF 79. After Trinity Industries, Inc. installed concrete floors in the paint shops, cleaning solvents were collected in a trough at ground level that funneled the solvents into the dirt. (ECF No. 333 at 16-17, 20-21.)

FOF 80. Open drums containing hazardous waste including spent solvents and paint waste were stored in the open air and allowed to overflow due to the accumulation of rain water. (ECF No. 333 at 17.)

FOF 81. With respect to the shot blasting process, which occurred in abrasive blast booths, Trinity Industries, Inc. used a recovery system on the floor of the abrasive blast booths that collected the BBs, which could be reused. (T.T. 4/20/2015 (ECF No. 316) at 62.) There was a sizing mechanism that took material large enough to be reused and put it into a hopper. Any material that was not large enough to be reused went into a drum for disposal to be disposed of at licensed treatment and disposal facilities. (Id. at 62-63.) Dust created by this process went through a dust collection system that was drummed up and disposed. (Id. at 63.) These processes proved to be an effective method to control air emission and hazardous waste generation. (Id.)

FOF 82. By December 22, 1987, Trinity Industries, Inc. began implementing a policy, pursuant to which Trinity Industries, Inc. stopped using metal-containing paints at the North Plant. (T.T. 4/20/2015 (ECF No. 316) at 65-66.)

FOF 83. In 1994, eight years after Trinity Industries, Inc. purchased the North Plant, it removed the old Erie shop, which still had dirt floors at that time. (T.T. 4/20/15 (ECF No. 340) at 49.) Trinity Industries, Inc. excavated the dirt floors from the old Erie shop and transported the excavated soil and demolition debris to a separate plant that it owned called the South Plant. Trinity Industries, Inc. dumped the excavated soils and demolition debris from the old Erie paint shop onto a baseball field at the South Plant. (Id. at 49.)

FOF 84. Beginning in the 1900s, it was customary practice to use asbestos-containing materials for building purposes. (T.T. 4/24/15 (ECF No. 343) at 16.) There were multiple structures at the North Plant at the time Greenlease acquired the North Plant. (Id. at 17-18.)

FOF 85. In or about 1994, the Trinity Industries, Inc. erected a new paint shop. (T.T. 4/24/15 (ECF No. 343) at 16.) In the 1990s, it was not customary practice to use asbestos-containing building materials. (Id. at 17.)

FOF 86. On May 31, 2000, a “Title V” hearing with respect to air permits and air emissions was held in Meadville, Pennsylvania, during which Trinity Industries, Inc.’s emissions of volatile organic compounds (“VOCs”) was discussed. (T.T. 4/20/15 (ECF No. 340) at 58, 76-77; Greenlease Ex. BB.) Notes from that meeting by the Trinity Industries, Inc.’s environmental engineer, Dennis Lencioni⁵ (“Lencioni”), reflect: “Recent meeting w/ EPA. Trinity is designated

⁵ In 1994, Lencioni began working for the Trinity plaintiffs as an environmental engineer. (Id.) In 1998, Lencioni became the environmental director for the Trinity plaintiffs, and currently

as high priority violator.” (T.T. 4/20/15 (ECF No. 340) at 58-59; T.T. 4/20/2015 (ECF No. 316) at 56; Greenlease Ex. BB.)

FOF 87. “Material safety data sheets” are required by the Occupational Safety and Health Administration (“OSHA”) to describe the occupational risks associated with products. (T.T. 4/20/15 (ECF No. 340) at 59.) Companies keep material safety data sheets at their facilities where products are being used. (Id.) One of the first things an inspector from OSHA will review are a company’s material safety data sheets. (Id. at 60.)

FOF 88. Trinity Industries, Inc. had material safety data sheets for the paint products it used at the North Plant. (T.T. 4/20/15 (ECF No. 340) at 60.) Trinity Industries, Inc. had material safety data sheets dated March 16, 1989, and September 28, 1995, for a paint named “safety yellow,” which is maintenance paint. (Id. at 61.) Lencioni described safety paint as follows:

It's a coating that's used for like safety railings, something that you want to draw attention to. But I would note that it's applied using brushes and rollers. It's not a coating that's sprayed on.

(T.T. 4/20/15 (ECF No. 340) at 61.) The material safety data sheet dated March 16, 1989, provided that the lead concentration for the safety yellow paint was “14.66 weight percent,” which was higher than OSHA’s airborne lead standard. (Id. at 61, 73.) The material safety data sheet dated September 29, 1995, provided that the lead concentration for the safety yellow paint was “10% to 15%,” which was higher than OSHA’s airborne lead standard. (Id. at 61, 73.)

holds that position for the company. (Id.) Lencioni works for the Trinity plaintiffs in Dallas, Texas. (T.T. 4/20/15 (ECF No. 340) at 39.)

FOF 89. Lencioni testified that safety yellow is not applied with a spray gun because “you’re trying to apply it to a very specific part. You don’t want to overspray and get on other things that you don’t want painted.” (T.T. 4/20/15 (ECF No. 340) at 74.)

FOF 90. During cross-examination, Greenlease’s counsel asked Lencioni: “[a]nd [safety yellow] is a paint product that Trinity Industries, Inc. had at the North Plant?” (T.T. 4/20/15 (ECF No. 340) at 61.) Lencioni responded: “I don’t know that. I know we had the [material safety data sheet] for it.” (*Id.*) During redirect examination, the Trinity plaintiffs’ counsel asked Lencioni: “Have you ever seen [safety yellow] applied or known of it to be used at Trinity?” (T.T. 4/20/15 (ECF No. 340) at 74.) Lencioni replied: “Yes. I’ve seen it applied. And in all instances, it was applied with brushes and rollers.” (*Id.*) Lencioni, therefore, contradicted his earlier testimony that he did not know whether safety yellow was used at the North Plant by Trinity Industries, Inc.

FOF 91. In 2000, Trinity Industries, Inc. ceased operations at the North Plant. (T.T. 4/20/15 (ECF No. 340) at 92.)

FOF 92. Trinity Industries, Inc. owned the North Plant until approximately 2004 when it sold the North Plant to William Marstellar (“Marstellar”) and his company, Commerce Park of Greenville, Inc. (“Commerce Park”). (Greenlease Ex. E ¶ 5.)

Trinity Industries, Inc.’s Sale of the North Plant to Marstellar and Commerce Park

FOF 93. When Trinity Industries, Inc. sold the North Plant to Marstellar and Commerce Park in 2004, a phase II environmental assessment was not done. (T.T. 4/20/15 (ECF No. 340) at 43.) A phase II environmental assessment is a soil sampling to determine whether there is contamination at a property; that assessment is commonly used by buyers in sales transactions for commercial properties on which industrial processes are performed. (*Id.* at 42.)

Trinity Industries, Inc. prohibited Marstellar from performing a phase II environmental assessment without Trinity Industries, Inc.’s consent. (Id. at 45; Greenlease Ex. K. ¶ 22.)

FOF 94. Marstellar intended to use the North Plant as an industrial park. (T.T. 4/20/2015 (ECF No. 316) at 67; T.T. 4/23/2015 (ECF No. 342) at 45; Greenlease Ex. E.) Because Marstellar could not find renters for the industrial park, he removed the buildings from the North Plant to recover the value of the scrap from those buildings. (Id.)

FOF 95. Marstellar, prior to demolishing the buildings at the North Plant, did “an ACM on asbestos-containing material removal action” and some amount of asbestos was removed from the North Plant. (T.T. 4/24/15 (ECF No. 343) at 15.)

Criminal Proceedings Against the Trinity plaintiffs and the Consent Order and Agreement

FOF 96. In June 2004, the Environmental Crimes Section (“ECS”) of the Pennsylvania Office of Attorney General’s Bureau of Criminal Investigations “commenced an investigation into waste disposal activities that occurred at the North Plant of Trinity Industries, Inc.” (Greenlease Ex. L. at TRINGRNL035095.)

FOF 97. William F. Brown (“Brown”), a special agent with the ECS, interviewed former employees of Trinity Industries, Inc. as a part of the criminal investigation with respect to the North Plant. (Greenlease Ex. J at TRINGRNL035241-42 and Ex. L at TRINGRNL035096-035101.)

FOF 98. On March 24, 2006, an investigative grand jury recommended that criminal proceedings be instituted against Trinity Industries, Inc. (Greenlease Ex. L.) On March 31, 2006, Brown filed an eleven-count criminal complaint against Trinity Industries, Inc. for alleged violations of Pennsylvania’s Solid Waste Management Act. (Greenlease Ex. I; Trinity pls. Ex. 1 ¶ J.)

FOF 99. The Commonwealth of Pennsylvania permitted Trinity Industries Rail Car Corporation, a wholly-owned subsidiary of Trinity Industries, Inc., to plead no contest to the charges against Trinity Industries, Inc. in the criminal complaint. (ECF No. 334 at 3.)

FOF 100. On December 21, 2006, Trinity Industries, Inc. was sentenced by the Court of Common Pleas of Mercer County, Pennsylvania, and ordered: (a) to pay a \$200,000 fine; (b) to make a \$50,000 contribution to a non-profit organization to be selected by the Attorney General; (c) to reimburse the PaDEP for its investigative costs of \$54,502.55; and (d) to “remediate all environmental contamination at the Trinity North and South plants in accordance with the consent order and agreement entered into with the [PaDEP] dated December 21, 2006.” (Greenlease Ex. M.)

FOF 101. Prior to or at the time of sentencing, the Trinity plaintiffs paid \$54,502.55 to the PaDEP. (T.T. 4/20/2015 (ECF No. 316) at 98; Trinity plaintiffs Ex. 2 ¶ 5.) The Trinity plaintiffs are seeking to recover that amount in this litigation as a response cost. (Id.) Lencioni testified that the Trinity plaintiffs were not given a choice about whether or not to pay \$54,502.55 to the PaDEP. (Id.)

FOF 102. The consent order and agreement dated December 21, 2006 (the “consent order”), provided that investigation of the North Plant was “necessary to fully identify the nature and extent of the release of hazardous substances at and/or potentially migrating to the North Plant...and to determine the Response Actions necessary to remediate the hazardous substances at and/or potentially migrating from [the North] Plant.” (Trinity pls. Ex. 1 ¶ I.)

FOF 103. Pursuant to the consent order, Trinity Industries, Inc. was required to investigate the North Plant to determine all impacts that may be on the site. (T.T. 4/20/15 (ECF No. 340 at 105; Trinity plaintiffs Ex. 70 at TRINGRNL050670.) In other words, Trinity

Industries, Inc.’s investigation of the North Plant was not limited to any certain timeframe, e.g., the timeframe during which Trinity Industries, Inc. owned and operated the North Plant. (T.T. 4/20/15 (ECF No. 340 at 105; Trinity plaintiffs Ex. 70 at TRINGRNL050670.)

FOF 104. Pursuant to the consent order, Trinity Industries, Inc. was required to comply with the Land Recycling and Environmental Remediation Standards Act, 35 PA. CONS. STAT. § 6026.101 et seq., which is known as “Act 2.” (T.T. 4/23/15 (ECF No. 342) at 63.)

FOF 105. Pursuant to Act 2, an entity performing a cleanup of a contaminated site, such as the North Plant, may utilize one of three “environmental standards when conducting remediation activities.” 35 PA. CONS. STAT. § 6026.301(a). The three environmental standards set forth in Act 2 are as follows:

- (1) a background standard which achieves background as further specified in section 302;
- (2) a Statewide health standard adopted by the Environmental Quality Board which achieves a uniform Statewide health-based level so that any substantial present or probable future risk to human health and the environment is eliminated as specified in section 303; or
- (3) a site-specific standard which achieves remediation levels based on a site-specific risk assessment so that any substantial present or probable future risk to human health and the environment is eliminated or reduced to protective levels based upon the present or currently planned future use of the property comprising the site as specified in section 304.

(Id.)

FOF 106. Act 2 does not have a mechanism for controlling costs; in other words, an entity may use one of the standards set forth in Act 2 even though it may be cheaper to perform a cleanup under one of the other standards set forth in Act 2. (T.T. 4/24/15 (ECF No. 343) at 54.) The PaDEP does not review whether an entity conducting a cleanup of a contaminated “spend[s]

more [money] than is necessary.” (Id.) An entity conducting a cleanup of a contaminated site can spend more money than is necessary under Act 2 and receive approval from the PaDEP. (Id.)

FOF 107. The consent order defined “Response Actions” as follows:

[A]ny and all of the actions taken or to be taken by the Department, Trinity, and/or any other responsible persons under the direction of the Department, relating to and addressing the release and threatened release of any hazardous substances at the North Plant and South Plant. Response Actions include, but are not limited to: investigations of responsible persons; investigations of environmental conditions at the North Plant and South Plant; investigations of contaminated groundwater, if any, at an potentially migrating from the Plants, including groundwater (if any) that has migrated and contaminated drinking water; actions to respond to the release and threatened release of any hazardous substance at and/or potentially migrating from the North Plant and South Plant; and maintenance of those actions.

(Trinity plaintiffs Ex. 1 at 5-6.)

FOF 108. The consent order defines “Response Costs” as follows:

[A]ll of the reasonable and necessary direct and indirect costs that the Department, Trinity, and/or any person acting on behalf of Trinity under the direction of the Department, have incurred and will incur relating to and addressing the Response Actions at the North Plant and South Plant. Response Costs include, but are not limited to: reasonable and necessary employees costs, attorneys’ fees, contractor costs, sampling costs, costs of investigation, treatment, and/or replacement of contaminated drinking water, if any, laboratory costs, oversight costs, and accrued interest.

(Trinity plaintiffs Ex. 1 at 6.)

FOF 109. Every “significant step” taken by Trinity Industries, Inc. at the North Plant with respect to the cleanup and the consent agreement required approval by the PaDEP. (T.T. 4/20/2015 (ECF No. 316) at 77; Trinity pls. Ex. 1 at 7 ¶ 6a.)

FOF 110. The consent order required Trinity Industries, Inc. to submit, among other things: an investigation work plan, a supplemental investigation work plan, a notice of intent to remediate, a remedial investigation report, a proposed cleanup work plan, a supplemental cleanup work plan, and a final report. (Trinity pls. Ex. 1 ¶ 7.) Trinity Industries, Inc. was required to submit each of the foregoing documents to the PaDEP for approval. (Id. ¶ 17.) The PaDEP upon review of the documents submitted by Trinity Industries, Inc., could “approve, approve modifications, or disapprove the document or portion thereof.” (Id.)

FOF 111. The PaDEP sent Trinity Industries, Inc. a letter dated November 19, 2007, approving the revised remedial investigation work plan dated November 17, 2007. (Trinity plaintiffs Ex. 17 at TRINGRNL 050682.)

FOF 112. The Trinity plaintiffs mailed Greenlease a “pre-suit notice” dated June 13, 2008, which described the contamination at the North Plant and Greenlease’s involvement in causing that contamination. (Trinity pls. Ex. 79.)

FOF 113. The PaDEP sent Trinity Industries, Inc. a letter dated December 5, 2011, approving with modifications the revised remedial investigation report for the North Plant. (Trinity plaintiffs Ex. 17 at TRINGRNL058354.) “Approval with modifications” means the PaDEP approved the document it reviewed and work at the North Plant could proceed, but the PaDEP identified certain matters in the document it reviewed that needed to be modified. (T.T. (ECF No. 341) at 76.) Trinity Industries, Inc. complied with the PaDEP modification requests. (Id.)

FOF 114. The PaDEP sent Trinity Industries, Inc. a letter dated March 13, 2012, approving with modifications the cleanup work plan. (Trinity plaintiffs Ex. 17 at

TRINGRNL067558.) Trinity Industries, Inc. complied with the modification requests made by the PaDEP. (T.T. (ECF No. 341) at 77.)

FOF 115. The PaDEP sent Trinity Industries, Inc. a letter dated March 28, 2013, approving the cleanup plan for the North Plant. (Trinity pls. Ex. 17 at TRINGRNL068014.)

FOF 116. The consent order provided that Trinity Industries, Inc. “shall use reasonable efforts to promptly obtain and maintain access for itself and for the [PaDEP]...to the North Plant...as necessary to meet Trinity’s obligations under this [consent order].” (Trinity pls. Ex. 1 ¶ 8.)

FOF 117. The Trinity plaintiffs did not voluntarily cleanup the North Plant; rather, they performed the cleanup pursuant to the consent order. (T.T. 4/20/15 (ECF No. 340) at 41.)

Trinity Industries, Inc. Purchased the North Plant from Marstellar

FOF 118. At some point after entering into the consent order, Trinity Industries, Inc. purchased the North Plant from Marstellar and Commerce Park. (T.T. 4/20/15 (ECF No. 340) at 92.)

FOF 119. Trinity Industries, Inc. or one of its wholly-owned subsidiaries, i.e., Trinity Industries Rail Car Corporation or Waldorf Properties, Inc., is the current owner of the North Plant. (ECF No. 334 at 2-3.)

FOF 120. When Trinity Industries, Inc. purchased the North Plant from Marstellar and Commerce Park, most, if not all, the buildings that had been located on the property had been demolished. (T.T. 4/20/15 (ECF No. 340) at 75-76, 92-93.) The buildings were demolished by Marstellar and Commerce Park in order to remove the scrap steel from the property and sell it for profit. (*Id.* at 76.)

FOF 121. The following photograph of the North Plant depicts the North Plant at the time Trinity Industries, Inc. purchased the North Plant from Marsteller and Commerce Park. (T.T. 4/20/15 (ECF No. 340) at 90.)



(Trinity pls. Ex. 24.)

FOF 122. Lubricating fluid from hydraulic presses was left at the North Plant by Marsteller and Commerce Park. (T.T. 4/23/15 (ECF No. 342) at 48.) Some of the waste left at the North Plant by Marsteller and Commerce Park was in an underground vault. The vault was approximately two-to-three feet wide and four-feet deep and contained mineral oil, i.e., waste oil and storm water mixed together. (*Id.* T.T. 4/24/15 (ECF No. 343) at 19.)

FOF 123. In 2007, the Trinity plaintiffs sued Marsteller and Commerce Park. (T.T. 4/23/15 (ECF No. 342) at 46; Greenlease Ex. E.) In the first amended complaint in that lawsuit, the Trinity plaintiffs alleged that Marsteller “discharged, deposited, dumped, disposed of, released, stored and placed hazardous substances, solid wastes and hazardous wastes, including, but not limited to, asbestos and other waste on the property.” (T.T. 4/23/15 (ECF No. 342) at 46;

Greenlease Ex. E ¶ 5.) The Trinity plaintiffs sought from Marstellar and Commerce Park, among other things:

a declaration that the Defendants are responsible for the investigation, monitoring, reporting, cleanup, removal, response, and remediation costs for the asbestos, xylenes, naphthalene, 1,2,4-trimethylbenzene, and other waste Defendants discharged, deposited, dumped, disposed of, released, stored, and placed on the Property or for which Defendants other assumed liability.

(Greenlease Ex. K ¶ 6; T.T. 4/23/15 (ECF No. 342) at 47.)

The Trinity plaintiffs' Retention of Golder

FOF 124. The Trinity plaintiffs selected Golder Associates, Inc. ("Golder") and Gormley to perform, direct, and supervise the cleanup of the North Plant, pursuant to the consent order. (T.T. 4/20/15 (ECF No. 316) at 75-76; Trinity pls. Ex. 1 ¶ 4.) The PaDEP approved the Trinity plaintiffs' selection of Golder and Gormley to perform the cleanup of the North Plant. (Trinity pls. Ex. 1 ¶ 4.)

FOF 125. The Trinity plaintiffs' relationship with Golder began at least ten years ago. (T.T. 4/20/15 (ECF No. 340) at 67.) Golder has worked on about six projects for the Trinity plaintiffs. (Id. at 68.) The Trinity plaintiffs did not utilize a competitive bidding process for the consulting work performed by Golder at the North Plant. (Id.) The Trinity plaintiffs do not utilize a specific standard with respect to the number of bids that must be received for work or direct the manner in which those bids are received. (Id. at 77.)

FOF 126. The Trinity plaintiffs worked with Golder in the past on response actions at other industrial sites. (T.T. 4/20/2015 (ECF No. 316) at 75.) According to Lencioni, Golder previously did excellent work for the Trinity plaintiffs and is a well-known company with a

“tremendous safety record.” (Id. at 76.) The Trinity plaintiffs determined Golder had the best team to work on the cleanup at the North Plant. (Id.)

FOF 127. The North Plant was a “high profile, high visibility location.” (T.T. 4/20/2015 (ECF No. 316) at 76.) The contamination at the North Plant received press. (Id.) The North Plant is situated in the middle of the town of Greenville, Pennsylvania, and is surrounded on three sides by residences. (Id. at 76; T.T. 4/20/15 (ECF No. 340) at 75.) The Trinity plaintiffs were concerned about the costs associated with “any missteps by a contractor with regard to the work that was done onsite.” (Id.) There was a time limit and urgency about getting a consultant with respect to the cleanup at the North Plant to satisfy the PaDEP and the deadlines set in the consent agreement. (Id. at 76-77.)

FOF 128. The cleanup at the North Plant was “high profile” in Greenville, Pennsylvania, because “it was a source of jobs and revenue for the community as well as it sits in the heart of the community.” (T.T. 4/20/15 (ECF No. 340) at 75.) The residences surrounding the North Plant are elevated so they look down upon the North Plant. (Id.)

FOF 129. The Trinity plaintiffs negotiated with Golder to try to control costs or pay only reasonable costs. (T.T. 4/20/2015 (ECF No. 316) at 78-79.) The Trinity plaintiffs and Golder agreed to an open book billing process,⁶ which “for a construction project is a method for the contractor and the owner or client to work together and manage risk on a site.” (Id.; T.T. 4/23/15 (ECF No. 342) at 21.) Lencioni explained the open book concept as follows:

[T]he effect of that is...you are really only paying for what you actually have to address. If for some reason there's an area that has less material than was originally expected, you pay less. You just pay on what the actual volumes were that were remediated.

⁶ This process is also known as an “open billing” process. (T.T. 4/20/2015 (ECF No. 316) at 79.)

(T.T. 4/20/2015 (ECF No. 316) at 79.) Gormley explained the open book billing process as follows:

In general contracting procedures for a construction project, there are design documents and bid documents that a contractor will use for bidding purposes. And he will figure in some percentage for -- to account for any risk that would be associated on his part. It could be 20 or 30 percent that he would add to his price.

Because he's assuming those risks, because he--his basis for coming up with a price is based on the documents he has in hand. When you do an open book process, you are coming together with the client. You're saying, okay, we're going to share the risk here. We're going to show you what all of our costs are. If we don't spend money on a particular item, you won't pay for it. If there is additional soil material, you will pay for it.

And generally for a closed book -- a standard contracting procedure, as soon as the contract is signed, the contractor is looking for ways to reduce his costs so he can increase his profits. So for instance, if he can find a supplier for fill material that he has to bring on-site that is significantly cheaper, he'll use that supplier even though it isn't in his bid price because it will increase his profit. Now, in the open book process, we do the same thing. We look to see if we can get better rates for suppliers, but we pass that savings on to the client.

(T.T. 4/23/15 (ECF No. 342) at 21-22.) According to Gormley, the open book billing method "contributed to the cost efficiency of the response work at the North Plant." (Id. at 23.)

FOF 130. The Trinity plaintiffs and Golder also used "a cost plus 10 percent" kind of billing. (T.T. 4/20/2015 (ECF No. 316) at 79.) Lencioni explained that concept as follows:

If there was an opportunity to save on unit costs, let's say there was an overrun of material or more material found than expected, we could negotiate with, say, a landfill or trucking company to reduce the per-unit cost and that savings would be transferred to Trinity.

(T.T. 4/20/2015 (ECF No. 316) at 80.)

FOF 131. The Trinity plaintiffs determined the open book, “cost plus 10 percent” kind of billing was a reasonable way to proceed with respect to Golder’s work at the North Plant. (T.T. 4/20/2015 (ECF No. 316) at 80.)

FOF 132. Gormley testified that Golder submitted its actual labor costs to the Trinity plaintiffs. Golder and the Trinity plaintiffs agreed to a “ten percent markup on subcontractors and materials.” (T.T. 4/23/15 (ECF No. 342) at 72.) Gormley explained the open book billing process applied to the construction costs, and for the rest of the work Golder “bill[ed] [the Trinity plaintiffs] at an hourly rate, and then there is a markup for administrative services and also a markup on direct costs. (Id. at 141.)

FOF 133. Prior to the date of the bench trial, the Trinity plaintiffs had paid all bills accrued to that date from the cleanup at the North Plant. (T.T. 4/20/15 (ECF No. 340) at 68.)

FOF 134. Lencioni described his experience with billing processes with other consultants and contractors with respect to cleanup of other industrial sites as follows:

One thing they like to do is underbid on certain aspects of the cleanup to the extent that there is more material to be cleaned up, they upcharge you for that additional work by percentages far beyond what was originally estimated. Or if there was less work to be done in an area, they still charge you the flat amount that they had proposed.

(T.T. 4/20/2015 (ECF No. 316) at 80.) The open book, “cost plus 10 percent” billing utilized by the Trinity plaintiffs and Golder with respect to the North Plant prevented Golder from up-charging the Trinity plaintiffs in the manner described above. (Id.)

FOF 135. During the bench trial, Gormley was called as the Trinity’s plaintiff’s allocation and cost expert witness. (ECF No. 284 at 13.)

Greenlease's Expert Witness—Gerritsen

FOF 136. Gerritsen reviewed the following with respect to this case: work plans for the remedial investigation; the initial and revised remedial investigation reports; the cleanup plans; the draft final report; historical maps, i.e., Sanborn fire insurance maps, historical operations maps, and maps provided by the Trinity plaintiffs; historical documentation of operations; deed information, e.g., deeds from 1910 and 1925; documentation from the PaDEP's criminal investigation of the Trinity plaintiffs; and approximately seven depositions. (T.T. 4/24/15 (ECF No. 343) at 45-47.)

FOF 137. Gerritsen twice visited the North Plant. (T.T. 4/24/15 (ECF No. 343) at 47.) During his first visit, which took place approximately two or three years prior to trial, he walked around the property, looked at the overall topography and ground surface to compare it to the aerial photographs and maps he previously reviewed, and looked at the property and land use surrounding the North Plant, including the adjacent railroad. (Id. at 47.)

FOF 138. The second time Gerritsen visited the North Plant was a week prior to trial. (T.T. 4/24/15 (ECF No. 343) at 48.) Gerritsen did not have access to enter onto the North Plant's premises. (Id. at 48.) Gerritsen walked along the perimeter of the North Plant and observed the response actions recently completed at the property. (Id.)

FOF 139. Gerritsen was the project manager on about twenty different properties undergoing an Act 2 cleanup. (T.T. 4/24/15 (ECF No. 343) at 54-55.) Gerritsen performed field work on each of those properties. (Id. at 55.)

FOF 140. Gerritsen's opinions in this case are based upon the documentation he reviewed and the information he received during his visits to the North Plant. (T.T. 4/24/15 (ECF No. 343) at 48.)

FOF 141. Gerritsen has experience dealing “with lead from various sources, but not specifically with lead paint.” (T.T. 4/27/15 (ECF No. 344) at 40.)

FOF 142. Gerritsen never worked on a Superfund site. (T.T. 4/27/15 (ECF No. 344) at 103.) He is not familiar with the Superfund standard. (Id.)

The Cleanup of the North Plant

FOF 143. Golder conducted the cleanup work at the North Plant in accordance with Act 2. (Trinity pls. Ex. 1 ¶ 6; T.T. 4/21/2015 (ECF No. 341) at 46, 48.) Gormley has experience applying Act 2 to cleanup sites. (T.T. 4/21/2015 (ECF No. 341) at 46.)

FOF 144. Gormley explained the Applicable Relevant Appropriate Standards (“ARARs”) as follows:

On a federal lead site, you’re required—under [S]uperfund or CERCLA, you’re required to review all ARARs, and in general the applicable standards are promulgated cleanup studies within the state that you’re working in. So if I’m working on a [S]uperfund site in Pennsylvania, any ARAR would be the statewide health studies that were established under Act 2 in Pennsylvania.

(T.T. 4/21/2015 (ECF No. 341) at 47.)

FOF 145. There are three standards for cleaning up a contaminated site under Act 2, i.e., a background standard, a statewide health standard, and a site-specific standard. (T.T. 4/24/15 (ECF No. 343) at 48-49.)

FOF 146. The background standard is a numerical-based standard in which data collected from an area of concern is compared to areas that are unaffected by operations. (T.T. 4/24/15 (ECF No. 343) at 49.) The background standard was not applied to the North Plant. (Id.)

FOF 147. The statewide health standard consists of two sets of numerical standards. (T.T. 4/24/15 (ECF No. 343) at 49.) One numerical standard is based upon residential standards, and the other numerical standard is based upon nonresidential standards. (Id.)

FOF 148. The statewide health standard was applied during the remedial investigation “as the numerical standards on which [Golder was] comparing [its] data to...identify areas that would be requiring some type of response action.” (T.T. 4/24/15 (ECF No. 343) at 50.)

FOF 149. The site-specific standard can be a numerical standard or the use of pathway elimination. (T.T. 4/24/15 (ECF No. 343) at 50.) The site-specific standard of pathway elimination was applied to the soil cleanup at the North Plant. (Id.) Pathway elimination may be described as follows:

Whenever you’re evaluating environmental issues on a property, you have exposure pathways, for example, human beings being exposed to soils that are impacted. That is a potentially complete exposure pathway. Pathway elimination gives you the opportunity to put a barrier between that pathway essentially. And so you—and therefore, it’s called pathway elimination.

(Id. at 50-51.)

FOF 150. Pathway elimination is commonly achieved through the placement of an asphalt cap. (T.T. 4/24/15 (ECF No. 343) at 52.) Gerritsen explained:

[Y]ou break the exposure pathway. In this case it would be for the direct contact, human contact with the contaminant. It is -- it breaks that. If you had surface oil with contamination, somebody's walking over it, working over that area, the asphalt cap is--eliminates that exposure pathway.

The Act 2 statewide health standards also include another grouping of standards, which are the soil-to-groundwater pathway. The cap also will prevent water infiltration and eliminate that pathway of -- the soil-to-groundwater pathway is the -- well, the soil-to-groundwater pathway, let me explain that first, is the pathway where rain water infiltrates through contaminated soil and has the potential to impact the underlying groundwater. The asphalt capping to address the soil-to-groundwater pathway prevents water infiltration.

(Id.)

FOF 151. Gerritsen explained that a remedial investigation would reveal the need to use pathway elimination at a contaminated site. (T.T. 4/24/15 (ECF No. 343) at 53.) During a remedial investigation, environmental media samples, e.g., soil, are collected. (Id.) The samples' analytical data is compared to established statewide health standards. If the samples' analytical data is higher than the statewide health standards, that medium must be addressed under Act 2. (Id.)

FOF 152. Gerritsen testified that pathway elimination was used at the North Plant. (T.T. 4/24/15 (ECF No. 343) at 53.) Gerritsen explained:

The pathway elimination was achieved throughout the capped areas of the site by placement of the cap. And at this site the extensive remedial actions that were done to first off remove all the soil, remove the concrete from that area -- and again we're talking about the areas where the final remedy was capped -- but to remove the concrete from that area, remove the soil, go through a regimen of testing, take that soil offsite and dispose of it offsite, backfill the area and then essentially reinstall the concrete cap there. All of those actions were necessary. What is necessary to achieve the site-specific standard of pathway elimination is placement of a cap.

(T.T. 4/24/15 (ECF No. 343) at 54.)

FOF 153. The consent order imposed upon the Trinity plaintiffs additional requirements that are not required by Act 2, e.g., submitting to the PaDEP for approval a remedial investigation work plan, a supplemental investigative work plan, and a cleanup work plan. (T.T. 4/23/15 (ECF No. 342) at 68-71.) In other words, because of the consent order, the cleanup at the North Plant was under a "greater degree of scrutiny" and "there was additional documentation that was required that's not normally required under an Act 2 program." (Id. at

70-71.) The cleanup at the North Plant was more difficult, inclusive, and expensive because it was done pursuant to the consent order and with oversight by the PaDEP. (Id. at 71.)

FOF 154. Gormley explained that in Pennsylvania, an investigation with respect to contamination would consider impacts to soil, groundwater (on sites that are near bodies of water), surface water, sediment, and vapor intrusion into the buildings. (T.T. 4/20/15 (ECF No. 340) at 84.) There were impacts to soil and groundwater at the North Plant. (Id.)

FOF 155. Gormley—on behalf of the Trinity plaintiffs—cooperated with the PaDEP with respect to the investigation and cleanup of the North Plant. (T.T. 4/21/2015 (ECF No. 341) at 74.) Gormley oversaw the preparation of reports that were submitted to the PaDEP with respect to the investigation and cleanup at the North Plant. (Id. at 74-75.) The PaDEP approved the reports Gormley submitted to it on behalf of the Trinity plaintiffs. (Id. at 75.)

FOF 156. Golder—during the cleanup process pursuant to the consent order with the PaDEP—advocated for the Trinity plaintiffs to use the “most sensible way to either investigate or address a cleanup” at the North Plant. (T.T. 4/21/2015 (ECF No. 341) at 78.) In other words, Golder attempted to reduce the amount of work the Trinity plaintiffs had to do to comply with the consent agreement. (Id. at 79.) Gormley explained:

When [Golder] was approached by [the PaDEP] with requests for information that we thought was out of line or over the top, we would provide additional information to support our position. And generally, we were able to reach agreement on a reduced number of additional items that would be required.

(T.T. 4/21/2015 (ECF No. 341) at 79.) Sometimes the PaDEP would reevaluate its position, and agree with Golder’s position; sometimes the PaDEP would hold firm in its position. (Id.)

FOF 157. Golder first investigated the historical operations at the North Plant. (T.T. 4/20/15 (ECF No. 340 at 102; 107.) Based upon that investigation, Golder identified potential

“areas of concern” (“AOCs”) and samples to be taken from those AOCs. (T.T. 4/20/15 (ECF No. 340 at 99.) Gormley explained:

For instance, there was a wheel and axle shop, and there was a potential that there was degreasers used in that location. So that was identified as an AOC. And we put sampling locations at that location.

There were several paint shops, the first one being the old Erie shop, which was designated as AOC-N1. Then we took the map, and we determined how big an area that paint shop was, and we put an initial dispersal of sample locations there to determine if there were impacts within that AOC.

(Id. at 103.) The AOCs investigated at the North Plant included the full range of historical releases at the property, including releases associated with operations of Greenlease and its predecessors. (Id. at 107.)

FOF 158. If the PaDEP identified an AOC that was not identified by Golder, it requested that Golder take a sample at that AOC. (T.T. 4/20/15 (ECF No. 340 at 99.)

FOF 159. Golder conducted environmental sampling at the North Plant. (T.T. 4/20/15 (ECF No. 340) at 96-7.) Gormley used biased sampling—as opposed to grid sampling—at the North Plant. (Id. at 98.)

FOF 160. Biased sampling is

generally used on former manufacturing facilities when you have a good—or current manufacturing facilities when you have a good record of what the previous operations were. It allows you to identify operations that had the potential to have releases or spills. It allows you to whittle down the types of chemicals of concern that you’re looking at for these different processes versus going in and sampling for everything.

(T.T. 4/20/15 (ECF No. 340) at 97.)

FOF 161. Grid sampling is

used for what are sometimes referred to as uncontrolled hazardous waste sites or old landfills where you don’t have reports of what was placed in what location. So you have to—instead of knowing that you had a particular operation that had, say,

oil in it, you have to go and look for all types of constituents that might have been released in that area.

So you lay out a grid. The grid could be 100-by-100, 50-by-50, and at those grid interception points you take samples, and you generally will take them for a full—a spectrum of chemicals of concern.

(T.T. 4/20/15 (ECF No. 340) at 98.)

FOF 162. Gormley used biased sampling for cleanup at the North Plant because he had a lot of information about the historical operations at the North Plant. (T.T. 4/20/15 (ECF No. 340) at 99.)

FOF 163. Pursuant to the consent order, Trinity was required to submit to the PaDEP a remedial investigation work plan with respect to the North Plant, which outlined the methods and sampling locations to be evaluated to determine whether there were impacts to soil or groundwater in those locations. (T.T. 4/20/15 (ECF No. 340 at 99.)

FOF 164. The categories of contamination arising from historical operations at the North Plant and found in Golder's sampling of the AOCs included metals, i.e., primarily lead, VOCs, semi-volatile organic compounds ("SVOCs"), and poly-chlorinated bi-phenyls ("PCBs"). (T.T. 4/20/15 (ECF No. 340) at 84-89.) Each of the foregoing contaminants found at the North Plant is considered a hazardous substance under state and federal law. (Id.)

FOF 165. Gormley defined areas at the North Plant that were impacted by contaminants based upon: (a) the constituents that were impacting the soil at that point in time; and (b) how the contaminants would be remediated. (T.T. 4/20/15 (ECF No. 340 at 109.) Gormley referred to the areas at the North Plant that were impacted by contaminants and

required remediation as impact areas (“IAs”). (See e.g., Trinity pls. Ex. 16 at TRINGRNL070577; Trinity pls. Ex. 83.⁷)

FOF 166. Lead was the primary contaminant in 13 of the 20 IAs identified by Golder, i.e., IAs 1-7, 10-12, 15, 17, and 19. (T.T. 4/23/15 (ECF No. 342) at 32; Trinity pls. Ex. 14 at TRINGRNL068077-82.) Secondary contaminants may have also been detected in those IAs in which lead was the primary contaminant. (T.T. 4/24/15 (ECF No. 343) at 56.) The secondary contaminants were addressed by remediating the primary contaminant, i.e., lead. (Id. at 56-57.)

FOF 167. The IAs differ in size. (T.T. 4/24/15 (ECF No. 343) at 57; Trinity Pls. Ex. 15 at TRINGRNL 068489.) The larger IAs are associated with lead. (T.T. 4/24/15 (ECF No. 343) at 57.)

FOF 168. Manganese was the primary contaminant in 1 of the 20 IAs identified by Golder, i.e., IA 14. (T.T. 4/23/15 (ECF No. 342) at 33; Trinity pls. Ex. 14 at TRINGRNL068077-82.)

FOF 169. There were VOCs at the North Plant. (T.T. 4/20/15 (ECF No. 340) at 85.) The following VOC impacts were found at the North Plant: “1,2,4-trimethylbenzene or TMB,

⁷ The Trinity plaintiffs during the bench trial offered exhibit 83, which is a table with twenty columns, into evidence. (T.T. 4/21/15 (ECF No. 341) at 17; Trinity pls. Ex. 83.) Greenlease objected because exhibit 83 contained information with respect to the volume of materials removed from the North Plant that the Trinity plaintiffs only disclosed to Greenlease on the eve of the bench trial. (T.T. 4/21/15 (ECF No. 341) at 17-20.) The court admitted the first four columns of the table in exhibit 83 into evidence because Greenlease was provided the information contained in those four columns during discovery in this case. (Id. at 24-25.) The court left the record for the bench trial open for Greenlease’s expert to examine the remainder of exhibit 83 and submit revised allocations based upon that examination. (Id.) Greenlease filed revised allocations and exhibits based upon Gerritsen’s examination of exhibit 83. (ECF No. 358.) The court, therefore, admits the remaining sixteen columns of exhibit 83 into evidence and closes the record on that matter.

1,3,5-trimethylbenzene,” xylenes, trichloroethene (“TCE”), and tetrachloroethene (“PCE”). (T.T. 4/20/15 (ECF No. 340) at 85.) VOCs were the primary contaminant in 3 of the 20 IAs identified by Golder, i.e., IAs 8, 9, and 13. (T.T. 4/23/15 (ECF No. 342) at 32-33; Trinity pls. Ex. 14 at TRINGRNL068077-82.) The VOCs were located primarily in the two paint shops, i.e., the old Erie paint shop and the main paint shop. A small area in the northwest portion of the property was also identified as a location of VOCs. (T.T. 4/24/15 (ECF No. 343) at 95.)

FOF 170. The VOCs were primarily in soil at the North Plant. (T.T. 4/20/15 (ECF No. 340) at 85.) There are minor impacts in the groundwater at the North Plant. (Id.)

FOF 171. There were SVOCs found at the North Plant. (T.T. 4/20/15 (ECF No. 340) at 85.) The following SVOCs were found in the soil at the North Plant: benzoapyprene; naphthalene; and 2,4-dinitrotoluene. (Id. at 86.) There is a mixture of SVOCs in the groundwater at the North Plant. (Id.) SVOCs were the primary contaminant in 2 of the 20 IAs identified by Golder, i.e., IAs 16 and 18. (T.T. 4/23/15 (ECF No. 342) at 32-33; T.T. 4/24/15 (ECF No. 343) at 102; Greenlease Ex. OOOO.)

FOF 172. The SVOC-impacts at the North Plant were “very small” compared to the lead-impacts at the North Plant. (T.T. 4/24/15 (ECF No. 343) at 102.)

FOF 173. There were polychlorinated bi-phenyls (“PCBs”) impacts found in a small area of soil at the North Plant. (T.T. 4/20/15 (ECF No. 340) at 86.) PCBs were the primary contaminants in 1 of the 20 IAs identified by Golder, i.e., IA 20. (T.T. 4/23/15 (ECF No. 342) at 33; Trinity pls. Ex. 14 at TRINGRNL068077-82.)

FOF 174. Lead, arsenic, manganese, 1,3,5-trimethylbenzene, ethylbenzene, xylenes, TCE, and PCE are hazardous substances under federal and Pennsylvania law. (T.T. 4/20/15 (ECF No. 340) at 86-9.)

FOF 175. Benzoapyrene, 2,4-dinitrotoluene, naphthalene, and PCBs are defined as hazardous substances under federal and Pennsylvania law. (T.T. 4/20/15 (ECF No. 340) at 89.)

FOF 176. Based upon the results of the remedial investigation, the PaDEP required the Trinity plaintiffs to submit a cleanup work plan. (T.T. 4/20/15 (ECF No. 340 at 101; Trinity pls. Ex. 12.)

FOF 177. Environmental cleanup is sometimes referred to as construction work. (T.T. 4/21/2015 (ECF No. 341) at 20.)

FOF 178. The cleanup work began at the North Plant in August 2013 and continued through the winter shutdown in December 2013. Construction work began again in the spring of 2014 and was completed on December 12, 2014. (T.T. 4/21/2015 (ECF No. 341) at 20-21.)

FOF 179. On August 7, 2013, Golder began soil cleanup activities at the North Plant. (Trinity pls. Ex. 16 at TRINGRNL070525.) The manufacturing buildings and infrastructure at the North Plant had been demolished to grade, and all that remained was demolition debris. (Id. at TRINGRNL070529.) The surface of the North Plant was “predominantly concrete slabs, concrete and asphalt pavement, former rail sidings, and debris covered surfaces with minimal vegetation.” (Id.)

FOF 180. As part of the cleanup efforts, approximately 39,000 tons of soil were disposed of off-site and approximately 15,000 tons of soil were capped on-site. (Trinity pls. Ex. 16 at TRINGRNL070525.)

FOF 181. Remediation of the soil at the North Plant included the following general construction and site cleanup activities: site mobilization; supplemental soil delineation; monitoring well abandonment; field demonstration of EnviroBlend mix design/methods; soil response actions; concrete demolition and management; surface water management; other site

cleanup activities; waste management; site restoration; and site survey. (Trinity pls. Ex. 16 at TRINGRNL070540.)

FOF 182. Gormley used three different response actions to remediate the contaminated soil at the North Plant. (T.T. 4/21/2015 (ECF No. 341) at 52-54; Trinity Pls. Ex. 16 at TRINGRNL070542 and 070577.)

FOF 183. The first kind of response action used by Gormley at the North Plant was on-site consolidation. An on-site consolidation area is an area of the North Plant at which Golder consolidated impacted material and capped it. (T.T. 4/21/2015 (ECF No. 341) at 52.) Consolidating impacted material—as opposed to transporting impacted material offsite for disposal—reduces the costs of the cleanup. (Id.) Gormley used on-site consolidation at other cleanup sites. (Id.)

FOF 184. The second kind of response action involved treating contaminated soils to render them nonhazardous and placing an asphalt cap over the area in which the hazardous soils were found. Areas of contaminated soil, which were categorized as “characteristically hazardous” or “potentially characteristically hazardous” were first preconditioned with a material called EnviroBlend. EnviroBlend changes the chemical content of the metals-impacted soil and renders it nonhazardous. (T.T. 4/21/2015 (ECF No. 341) at 52-53.)

FOF 185. Gormley explained:

If you're able to render something nonhazardous -- and you can only do this when something is characteristically hazardous or potentially characteristically hazardous. If it's a listed as hazardous waste, you can't. It has to go to a hazardous waste landfill.

But we had soil that had the potential to be characteristically hazardous waste for lead. We did some testing prior to going on-site. We determined that if we were able to precondition it with this material, that it would be rendered nonhazardous and could be taken to a Subtitle D landfill.

(T.T. 4/21/2015 (ECF No. 341) at 53.)

FOF 186. Gormley explained what it means for contaminated soils to be hazardous:

Certain materials, the majority of them are metals, can leach out under certain conditions. So you have to do a test called a TCLP test. It's a toxicity characteristic leaching procedure or TCLP. You will run that test to determine whether your leachable fraction of metals exceed a certain limit. If they do, it's considered a hazardous waste, and it cannot go -- without any further work on it, it can't go to a nonhazardous waste landfill. It would have to go to a hazardous waste landfill.

(T.T. 4/23/15 (ECF No. 342) at 16.)

FOF 187. Golder sent the soils from the North Plant to a subcontracted lab, i.e., Kermon Environmental Services, Inc., which performed toxicity testing on the soils from the North Plant to determine whether they were hazardous. (Id.; Trinity pls. Ex. 16 at TRINGRNL070537.)

FOF 188. After characteristically hazardous soil or potentially characteristically hazardous soil was preconditioned and rendered nonhazardous, it was transported offsite to a nonhazardous landfill (also known as a Subtitle D landfill), as opposed to a hazardous waste landfill. (T.T. 4/21/2015 (ECF No. 341) at 53.) Preconditioning the soils permits transportation of the nonhazardous soils to a nonhazardous landfill, which is two to four times less expensive than having to dispose hazardous soils at a hazardous landfill. (Id.) Contaminated soils that constitute hazardous waste—as opposed to characteristically hazardous waste or potentially characteristically hazardous waste—cannot be preconditioned and must be transported to a hazardous waste landfill. (Id.)

FOF 189. The third response action used by Gormley was excavating soil and transporting it offsite for disposal without first preconditioning it with EnviroBlend. (T.T. 4/21/2015 (ECF No. 341) at 54.)

FOF 190. Golder excavated soil at different depths. (T.T. 4/21/2015 (ECF No. 341) at 54; Trinity plaintiffs Ex. 16 at TRINGRNL070577.) For example, some soil was excavated zero-to-two-feet from the surface, while other soil was excavated more than 8.1 feet from the surface. (T.T. 4/21/2015 (ECF No. 341) at 54; Trinity plaintiffs Ex. 16 at TRINGRNL070577.)

Golder's Use of a Standard Action Level

FOF 191. Golder “determined that lead concentrations above a conservatively selected action level of 1,000 mg/kg were considered for design purposes as potentially hazardous waste,” meaning the Trinity plaintiffs were required to either precondition those soils to render them nonhazardous and transport them to a Subtitle D landfill or to transport them to a hazardous waste landfill. (Trinity pls. Ex. 16 at TRINGRNL070531; T.T. 4/23/15 (ECF No. 342) at 16.)

FOF 192. Gormley explained that a standard action level of 1,000 parts per million was selected because when toxicity leaching procedure (“TCLP”) testing was performed on soils from the North Plant, one soil sample that was 1,500 parts per million passed the toxicity testing and one soil sample that was 1,500 parts per million failed the toxicity testing. (*Id.*) Gormley explained:

The chances for failing TCLP and leaving hazardous waste on-site was a possibility. So we went down to the 1,000 parts per million, understanding that it was the nonresidential direct contact standard for the Pennsylvania statewide health standards, that it would be a level that would be below the treatability results that we saw with sufficient safety factor. And it was a level that DEP was very familiar with. So our chances of getting an acceptance of that -- the action level was very good.

...
When Act 2 was promulgated, it developed statewide health standards for both direct contact and soil-to-groundwater for both nonresidential and residential scenarios for a number of constituents, including lead.

...
There's a statewide health standard, and those are generally used when you're trying to investigate a site and trying to determine what your impacts are. Under Act 2 they do allow you to use site-specific standards which can either be a numerical standard or it can be an action. And there are also background standards.

(T.T. 4/23/15 (ECF No. 342) at 19-20.)

FOF 193. The PaDEP accepted Golder's use of a standard action level of 1,000 parts per million. (Id. at 20.)

FOF 194. During site cleanup activities, Golder determined that a significant amount of soils exceeded the 1,000 parts per million standard action level. (Trinity pls. Ex. 16 at TRINGRNL070532.) "Thus, strictly applying the originally proposed soils disposal action level would require excavation and off-Site disposal of a greater quantity of materials than originally anticipated." (Trinity pls. Ex. 16 at TRINGRNL070531.)

FOF 195. "Rather than continue to remove and dispose off-Site soils from North Plant areas that would be capped anyway as part of the approved remedy, Golder performed a site characterization study to determine if there was a more appropriate action level to predict and define the presence of potentially characteristic hazardous waste." (Trinity pls. Ex. 16 at TRINGRNL070532.)

FOF 196. Golder as part of the site characterization study "collected 5-point composite soil samples from 46 locations distributed across the excavated walls and floors of" areas impacted by contaminants "and analyzed them for total metals and TCLP metals." (Trinity pls. Ex. 16 at TRINGRNL070532.)

FOF 197. The site characterization study showed that “while many of the samples exceeded the initially established 1,000 mg/kg lead threshold, none exceeded the TCLP limits for any metals necessary to be defined as hazardous waste.” (Trinity pls. Ex. 16 at TRINGRNL070532.)

FOF 198. “In light of the significant quantities of additional impacted historic fill found on-Site and the results of the soil characterization study, Golder requested formal PaDEP approval of a revised action level for excavation and off-Site disposal of metals impacted soils from the [impacted areas] planned to be capped.” (Trinity pls. Ex. 16 at TRINGRNL070532.) The revised standard action level proposed by Golder to the PaDEP was 2,500 parts per million. (Id.)

FOF 199. The PaDEP approved Golder’s modified action level of 2,500 parts per million. (Trinity pls. Ex. 16 at TRINGRNL070532.)

Gerritsen’s Opinion with respect to Golder’s Use of a Standard Action Level

FOF 200. Gerritsen opines that the costs incurred by the Trinity plaintiffs with respect to Gormley’s use of a standard action level were not “reasonable or necessary” under CERCLA and the HSCA for three reasons.

FOF 201. First, Gerritsen opined that Golder’s TCLP testing was *unreliable*. (T.T. 4/27/15 (ECF No. 344) at 148.) Gerritsen explained:

The treatability study included three gross samples collected from the North Plant for laboratory analysis of blending requirements for their prescription for conditioning of the soil. The three samples that were -- and I believe they were just put in plastic bags and sent in from the report that I had read. There's no reference to where the samples were collected from, how they were collected, and not really in -- not in a scientifically dependable manner as being representative of conditions at the site.

(T.T. 4/27/15 (ECF No. 344) at 148-49.) Gerritsen opines that Golder did not subject a sufficient quantity of soil to the toxicity testing “to get a representative sample at the North Plant.” (Id. at 149.) Gerritsen explained that “[t]he more samples you collect from an area, the more representative you are going to be of that area.” (Id.)

FOF 202. Golder during its site characterization study collected 84 samples from two different areas, i.e., impact area 1 and impact 10, and tested those samples “for metals, total metals analysis, and TCLP analysis.” (T.T. 4/27/15 (ECF No. 344) at 149.)

FOF 203. The PaDEP oversaw Golder’s remedial investigation and cleanup of the North Plant. Impact areas 1 and 10 represent two of the largest impact areas identified by Golder. (Trinity pls. Ex. 16 at TRINGRNL070577.)

FOF 204. Gerritsen’s second opinion attacking Golder’s use of a standard action level is that establishing a standard action level at the North Plant was not necessary. (T.T. 4/24/15 (ECF No. 343) at 113, 118.) Gerritsen opined that Golder should have capped the areas of the North Plant that had preexisting caps and not excavated the soils beneath those preexisting caps. (T.T. 4/24/15 (ECF No. 343) at 113, 118.)

FOF 205. Gerritsen explained that Act 2’s standards for lead in soils are set based upon the depth of soil. (T.T. 4/24/15 (ECF No. 343) at 112.) For example, the standard for surface soil, i.e., soils zero to two feet from the surface, is 1,000 milligrams of lead per one kilogram of soil. (Id.) The standard for subsurface soil, i.e., soils two to fifteen feet from the surface, is 190,000 milligrams of lead per one kilogram of soil. (Id.)

FOF 206. More than 200 soil borings⁸ were taken by Golder at the North Plant. (T.T. 4/24/15 (ECF No. 343) at 112.) The soil in forty of the borings exceeded 1,000 milligrams of lead per one kilogram of soil. (Id.) The soils in eight of the borings exceeded 2,500 milligrams of lead per one kilogram of soil. (Id.) The soils in one or two of the borings “were up in the tens of thousands.” (Id. at 112-13.)

FOF 207. There were areas of the North Plant that—prior to the cleanup—had existing concrete caps on them. (T.T. 4/24/15 (ECF No. 343) at 107; Trinity Pls. Ex. 16 at TRINGRNL070578.) According to Gerritsen, Golder removed the existing concrete caps, excavated the soils underneath the concrete caps, performed sampling of the soils found underneath the concrete caps, conditioned the soils found underneath the concrete caps, then transported the soils for disposal in offsite landfills. (T.T. 4/24/15 (ECF No. 343) at 106-07.)

⁸ A soil bore is a means to gather information during a remedial investigation. (T.T. 4/24/15 (ECF No. 343) at 62.) Gerritsen described the use of soil bores in this case as follows:

A majority of the borings were advanced with a geoprobe. That's the type of equipment that's used, but it essentially has a tube, steel tube that you slam into the ground with a very powerful hydraulic hammer. It's a four-foot long tube, and you push that into the ground, extract it, and then there's a clear plastic sleeve inside of that tube that you're able to extract, and then it gives you a tube full essentially of the soil from that representative of that depth interval from zero -- in this case zero to four feet.

Then you go subsequently from four to eight and then from eight to twelve, and it gives you an idea of the subsurface conditions that are present in that specific area.

(T.T. 4/24/15 (ECF No. 343) at 62.) A soil boring log is a record of data recorded from a soil boring. (T.T. 4/24/15 (ECF No. 343) at 63.) A soil boring log may indicate whether historic fill was found in the location at which the soil boring was taken. (Id. at 64.)

FOF 208. Gerritsen opined that the soils found beneath the preexisting concrete caps did not have to be removed by Golder. (T.T. 4/24/15 (ECF No. 343) at 107.)

FOF 209. According to Gerritsen, Gormley's opinion that some of the soils under the preexisting concrete caps were potentially characteristically hazardous and had to be removed because they failed toxicity testing is not a proper analysis under Act 2. (T.T. 4/24/15 (ECF No. 343) at 107.) Gerritsen explained that “[t]o achieve the site-specific standard of pathway elimination, it's not necessary to remove the material that's underneath the cap.” (Id. at 107-08.)

FOF 210. Gerritsen opined that in the areas with preexisting caps, Golder should have examined the preexisting caps and then placed a proper asphalt cap over those areas. (T.T. 4/24/15 (ECF No. 343) at 108.)

FOF 211. The method proposed by Gerritsen, i.e., placing a cap over the areas in which there was a preexisting concrete cap instead of excavating and disposing the soils underneath the preexisting concrete caps prior to replacing the caps, would under Act 2 result in a deed restriction or environmental covenant with respect to the North Plant. (T.T. 4/24/15 (ECF No. 343) at 108.) Gerritsen explained:

A deed restriction identifies land use restrictions, restrictions in activity in the future. It would be incorporated into the deed to communicate to the current property owner and future property owners the location of these -- of the area and also any -- what the specific restrictions would be for that area.

(Id.) Gerritsen testified that the method employed by Gormley also resulted in an environmental covenant, and under either method, the North Plant could be used as a parking lot. (Id. at 109-110.) Gerritsen employed his proposed method in another cleanup of a site under Act 2 with the PaDEP. (Id. at 110.)

FOF 212. Gerritsen's third opinion attacking Golder's use of a standard action level is that even if the use of a standard action level was required under Act 2, Golder improperly applied the standard action level at the North Plant. (Id.)

FOF 213. Gerritsen disagrees with Golder's initial use of a standard action level of 1,000 milligrams of lead per one kilogram of soil because it was the statewide health standard. (T.T. 4/24/15 (ECF No. 343) at 114.) According to Gerritsen, Golder should have initially derived a site-specific standard action level, rather than beginning with the 1,000 milligrams of lead per one kilogram of soil-level. (Id.) Gerritsen explained the steps for establishing a site-specific standard action level as follows:

You would complete a study, collecting samples across the site that are representative throughout the impact areas, run it for laboratory analysis of total lead and the TCLP to determine what the concentrations of lead in that specific -- in the soils specific to the North Plant would start to fail TCLP.

And through doing a study, you could determine what that threshold level of total lead would be and to establish an action level.

(T.T. 4/24/15 (ECF No. 343) at 114.) Gerritsen opined that a site characterization study should have been conducted "up front" to establish the standard action level, which would "have saved unnecessary costs." (Id. at 117.)

FOF 214. Toxicity testing or TCLP testing is not required under Act 2. (T.T. 4/24/15 (ECF No. 343) at 115.)

FOF 215. According to Gerritsen, "[a]fter [Golder] excavated to the limits of the cleanup plan, [it] found that 1,000 [milligrams of lead per one kilogram of soil] was too low." (T.T. 4/24/15 (ECF No. 343) at 115.) Golder, after having concerns about the 1,000 milligrams of lead per kilogram of soil-level, conducted a "site characterization study," which confirmed that a standard action level of 1,000 milligrams per one kilogram of soil was too low. (Id. at 115-

16.) Golder then used a site-specific characterization study to establish a new standard action level of 2,500 milligrams of lead per one kilogram of soil. (Id. at 116.) The PaDEP approved the new standard action level of 2,500 milligrams of lead per one kilogram of soil. (Id.)

FOF 216. Golder's final report indicates 84 soil samples were collected, and none of those samples exceeded 2,500 milligrams of lead per one kilogram of soil or failed the toxicity testing. (T.T. 4/24/15 (ECF No. 343) at 116.)

FOF 217. Gerritsen opined that the effect of having a standard action level of 2,500 milligrams of lead per one kilogram of soil versus 1,000 milligrams of lead per one kilogram of soil is it would have "significantly reduced the amount of additional excavation that was required at the site." (T.T. 4/24/15 (ECF No. 343) at 117.) In other words, soil that was excavated using the 1,000 milligrams of lead per one kilogram of soil standard action level would not have been excavated using the standard action level of 2,500 milligrams of lead per one kilogram of soil. (Id.)

FOF 218. If Golder had initially used the 2,500 milligrams of lead per one kilogram of soil standard action level, more soil would have been left at the North Plant than was left using the 1,000 kilograms of lead per one kilogram of soils standard used at first by Golder. (T.T. 4/27/15 (ECF No. 344) at 101.)

FOF 219. If Golder had performed a site-specific characterization study "up front" and initially established a standard action level of 2,500 parts per million for lead impacts, there would have been soils left at the North Plant that failed the TCLP testing, i.e., hazardous waste would have been left at the North Plant. (T.T. 4/23/15 (ECF No. 342) at 17.) Gormley explained:

Well, we had treatability testing data that had TCLP results that were -- that failed that were lower than the 2,500. So the State of Pennsylvania would not have accepted for us to leave that material in place without any further action.

(Id.)

FOF 220. If hazardous waste was left in place at the North Plant, i.e., if the hazardous waste was not excavated and transported to a Subtitle C landfill, the Trinity plaintiffs would have been required to place a Subtitle C⁹ cap atop of the areas of the North Plant in which the hazardous waste was left in place. (T.T. 4/23/15 (ECF No. 342) at 12-20.)

FOF 221. If a Subtitle C cap—instead of an asphalt cap—was installed at the North Plant, the North Plant would have the appearance of a landfill, i.e., “there would be a noticeable mound...in the area...visible from several blocks away from the site.” (T.T. 4/23/15 (ECF No. 342) at 18.) A landfill at the North Plant would not be consistent with the residential character of Greenville, Pennsylvania. (Id. at 18-19.) A Subtitle C cap would not allow for the reuse of the North Plant for a “big box” store and parking lot because significant parts of the property would not have any potential for reuse. (Id. at 19.)

⁹ The state and federal government have regulations that dictate standards for caps. (T.T. 4/23/15 (ECF No. 342) at 12.) The RCRA sets forth standards for hazardous and nonhazardous waste caps. (Id.) Subtitle C of the RCRA sets forth the standard for a hazardous waste cap. (Id. at 13.) A Subtitle C cap has multiple impermeable barriers that are placed over hazardous waste. A clay or plastic “HDPE” liner is placed over those impermeable barriers. (Id.) Gormley explained:

You'd have to put a bedding layer first to ensure that you had a drainage off the surface of that cap because you wouldn't want any ponding on a cap. Ponding on a cap would lend towards leakage through the cap.

So you would build up a surface to take those impermeable surfaces. They'd have to meet minimum slope requirements to allow for drainage. And once that bedding material was in, you could install impermeable barriers.

And then there's a requirement for cover soil, including a vegetative layer that's generally two feet that allows for both drainage at the surface of the new covering, the impermeable barrier, and then also for vegetative growth on the top of the cap.

(T.T. 4/23/2015 (ECF No. 342) at 13-14.)

FOF 222. A Subtitle C cap—as opposed to an asphalt cap—is more difficult to install, requires expertise to design, install, and maintain, and is significantly more expensive. (Id. at 14.)

Historic Fill

FOF 223. Golder found historic fill at the North Plant. (T.T. 4/24/15 (ECF No. 343) at 66-67.)

FOF 224. All historic fill found at the North Plant was deposited prior to the Trinity plaintiffs owning and operating the North Plant. (T.T. 4/27/15 (ECF No. 344) at 10.)

FOF 225. Gerritsen described the use of historic fill in Western Pennsylvania as follows:

Well, historic fill is -- fill is -- first off, it's required through the industrial development of the region. You know, the development occurred in the areas where it was accessible to transportation, along the railroads. The railroads were built along the rivers. The rivers were always built along areas where there is potential for flooding.

There's topography with slope, and you would have to adjust the land so that you could facilitate industrial development. You find it in this area in particular along all of the three rivers here. There's layers -- there's thirty, forty feet of fill derived from, for example, the steel-making industry that has just been prevalent throughout here through time.

And generally that's the concept, is that it's used to elevate the land surface, stabilize the land surface for industrial development.

(Id.)

FOF 226. Gerritsen opined that he would expect to see historic fill along railroad tracks because “industrial development historically occurred along riverbanks. That was the mode of transportation for product and for...raw materials.” (T.T. 4/24/15 (ECF No. 343) at 61.)

FOF 227. There are two options for addressing historic fill under Act 2: (1) remove the historic fill; or (2) close it in place, e.g., by placing a cap over the historic fill. (T.T. 4/24/15 (ECF No. 343) at 66.)

FOF 228. The historic fill that Golder found at the North Plant contained a “slag-like material.” (T.T. 4/23/15 (ECF No. 342) at 78.)

FOF 229. Slag is a byproduct of a number of different processes, including foundries and steel mills. (T.T. 4/23/15 (ECF No. 342) at 78.)

FOF 230. Slag may have been created by Shelby Steel’s process of making steel plates into steel tubing. (T.T. 4/23/15 (ECF No. 342) at 78.) Gormley did not contact U.S. Steel to obtain historical documents from Shelby Steel. (Id. at 79.)

FOF 231. Golder found bottom ash and fly ash in the historic fill at the North Plant. (T.T. 4/23/15 (ECF No. 342) at 79.)

FOF 232. Shelby Steel had industrial furnaces at the North Plant prior to Greenlease purchasing the property. (T.T. 4/23/15 (ECF No. 342) at 59.)

FOF 233. Gormley did not know whether the bottom ash and fly ash discovered in the historic fill came from Shelby Steel’s operations at the North Plant. (T.T. 4/23/15 (ECF No. 342) at 79.) Gormley testified that Golder found bottom ash and fly ash in the areas of the creek, and Shelby Steel used “the creek as a source of their reservoir for fire protection purposes.” (Id. at 79-80.)

Golder’s Final Report

FOF 234. Pursuant to the consent order and Act 2, Golder was required to submit a final report about the cleanup activities and how the methods used by Golder followed the cleanup designs and met the proposed deadlines set forth in the consent agreement. (T.T.

4/21/2015 (ECF No. 341) at 22, 46.) Quantity information with respect to the cleanup at the North Plant was provided in the final report submitted to the PaDEP by Golder. (Id.)

FOF 235. Golder on behalf of the Trinity plaintiffs submitted a notice of intent to remediate. (T.T. 4/23/15 (ECF No. 342) at 7.) Because Golder intended to use a site-specific standard to remediate the North Plant, the Trinity plaintiffs were required to send letters to the community to ask the community whether the community wanted to be involved in the remediation and redevelopment of the North Plant. (Id.) The Borough of Greenville and Hempfield Township responded to the letters indicating that they wanted to be involved in the remediation and redevelopment of the North Plant. (Id.; Trinity Pls. Ex. 7.) Because the community responded to the letters sent by Golder on behalf of the Trinity plaintiffs, Golder under Act 2 was required to develop a public involvement plan approved by the local communities. (T.T. 4/23/15 (ECF No. 342) at 8-9; Trinity Pls. Ex. 8.) The public involvement plan included sending correspondence to the local communities, placing notices in the newspapers, holding at least three public meetings about the investigations and cleanup at the North Plant and the South Plant, and establishing public repositories at which members of the public could review and submit comments about reports Golder prepared with respect to the remediation and cleanup at the North Plant. (T.T. 4/21/2015 (ECF No. 341) at 49-50; T.T. 4/23/15 (ECF No. 342) at 8-10; Trinity Pls. Exs. 8, 9, 10.)

FOF 236. Members of the public as part of the public involvement plan were given opportunities to express their thoughts about the investigation and cleanup at the North Plant, which included participation at the public meetings and the opportunity to review and submit comments to reports published by Golder on behalf of the Trinity plaintiffs. (T.T. 4/23/15 (ECF No. 342) at 10.)

FOF 237. The members of the public had an active interest in ensuring the North Plant was cleaned up to allow for future use of the property. (T.T. 4/23/15 (ECF No. 342) at 10.) Gormley testified that the remediation methods used at the North Plant are responsive to the public's interest in the future reuse of the North Plant. (Id. at 10-11.)

FOF 238. The final report was "put out for public comment in public repositories." (T.T. 4/21/2015 (ECF No. 341) at 48.) A notice was published in a local newspaper stating there was a public comment period with respect to the final report, and the final report was available in two public repositories. (Id. at 50.) The public comment period for the final report began around March 13, 2015, and ended on April 15, 2015. (Id.)

FOF 239. The final report was not submitted to the PaDEP until after the public comment period was over and the Trinity plaintiffs developed a response to any comments made during the comment period. (T.T. 4/21/2015 (ECF No. 341) at 50.)

FOF 240. The cleanup at the North Plant was completed. (T.T. 4/21/2015 (ECF No. 341) at 45.)

Ongoing Work

FOF 241. There are ongoing operations and maintenance work at the North Plant with respect to the "capping placement material." (T.T. 4/23/15 (ECF No. 342) at 23.) The operations and maintenance work with respect to the capping placement material involves inspection to determine whether there is any cracking in the surface of the asphalt, whether the drains are clogged and are properly operating and functioning, and whether safety measures, e.g., fencing, are still in place and functioning. (T.T. 4/23/15 (ECF No. 342) at 24.)

FOF 242. There are ongoing ground water response actions, which include "eight quarters of ground water monitoring followed by a final report for ground water activities." (T.T.

4/23/15 (ECF No. 342) at 23.) The consent order required ground water monitoring. (Id. at 24.) There was a connection between ground water constituents at the North Plant and soil constituents at the North Plant. (Id.) Golder performed the soil remediation separately from the ground water monitoring. (Id.) Golder on behalf of the Trinity plaintiffs must monitor the ground water to determine if there are ongoing impacts to ground water or if the impacts in the ground water were addressed by the remediation of the soil at the North Plant. (Id.)

FOF 243. At the time of trial, the ongoing ground water monitoring by Golder had begun at the North Plant. (T.T. 4/23/15 (ECF No. 342) at 25.) The costs associated with the ongoing ground water monitoring and operations and maintenance at the North Plant will be invoiced by Golder to the Trinity plaintiffs. (Id.)

Reuse of the North Plant

FOF 244. The cleanup at the North Plant makes it feasible for reuse. (T.T. 4/21/2015 (ECF No. 341) at 79.)

FOF 245. The asphalt cap utilized by Golder at the North Plant makes large portions of the North Plant “look like a big parking lot.” (T.T. 4/21/2015 (ECF No. 341) at 81.) There are areas of the North Plant that were not subject to an asphalt cap. Those areas not subject to an asphalt cap have foundations of buildings on them, existing roads, or grass. (Id.) There were areas of the North Plant that did not contain any impacted material. (Id. at 82.)

FOF 246. If a Subtitle C cap—instead of an asphalt cap—had been installed at the North Plant, the North Plant would have had the appearance of a landfill, i.e., “there would be a noticeable mound...in the area...visible from several blocks away from the site.” (T.T. 4/23/15 (ECF No. 342) at 18.) A landfill at the North Plant would not be consistent with the residential character of Greenville, Pennsylvania. (Id. at 18-19.) A Subtitle C cap would not allow for the

reuse of the North Plant for a “big box” store and parking lot because significant parts of the property would not have any potential for reuse. (*Id.* at 19.)

FOF 247. The areas of the North Plant that are subject to an asphalt cap can be used as parking areas; indeed, areas subject to asphalt caps are “used all the time under Act 2.” (T.T. 4/21/2015 (ECF No. 341) at 82.) If someone wanted to dig in the areas that are subject to an asphalt cap, he or she would have to develop a soil management plan and health and safety controls that would prevent the further spread of contamination of the impacts that exist under the asphalt caps. (*Id.*) The areas of the North Plant that are not subject to an asphalt cap are safe for workers, and structures could be erected on those areas. (*Id.*) The North Plant is zoned for industrial use. (*Id.*)

FOF 248. Prior to the remediation performed by Golder on behalf of the Trinity plaintiffs, the North Plant could not safely be reused to erect a structure or for any type of industrial activity. (T.T. 4/21/2015 (ECF No. 341) at 82-83.)

FOF 249. As of the time of the trial in this case, the area surrounding the North Plant was of a residential and industrial nature. (T.T. 4/21/2015 (ECF No. 341) at 83-84.) The area is more residential than it has ever been because industrial activity is not taking place at the North Plant. (*Id.* at 84.)

FOF 250. A “big box store” such as a Home Depot could be developed at the North Plant. (T.T. 4/21/2015 (ECF No. 341) at 84.) The main building could be erected on the areas of the North Plant that have no impacts. At least part of the parking lot could be located on the asphalt capped areas of the North Plant. (*Id.*) This kind of use of the North Plant would be typical for this type of property. (*Id.*)

Gormley’s Allocation

FOF 251. Gormley developed a three-part methodology to assign a percentage of responsibility to Greenlease or the Trinity plaintiffs for the impacts at the North Plant. (T.T. 4/20/15 (ECF No. 340 at 108-09.)

FOF 252. First, Gormley “look[ed] at all the operations that occurred in these areas of concern where we found impacts on.” (Id. at 108.) Gormley “look[ed] at the operating histories and the historical information about the chemicals that were used at the time, and assign[ed] a percentage of responsibility to either Greenlease or to Trinity based on those operations.” (Id. at 108-09.) This method is referred to as an AOC-by-AOC percentage allocation. (Id. at 109.)

FOF 253. Gormley identified three broad categories of mechanisms of releases at the North Plant that occurred during the time Greenlease and its predecessors owned and operated the North Plant: (a) VOCs related to previous operations that are located in soil and sometimes in groundwater; (b) more general dispersions from some of the painting areas that were done both in the paint booths and in outside areas; and (c) historical fill that was brought onto the site that was used for the development of the property from 1911 until present. (T.T. 4/20/15 (ECF No. 340) at 125-26.) Gormley found that some AOCs contained more than one of the foregoing contaminants. (T.T. 4/20/15 (ECF No. 340) at 126.)

FOF 254. After Gormley’s historical analysis indicated the areas at the North Plant at which Greenlease operated and the Trinity plaintiffs operated, Golder conducted laboratory sampling in those areas. (T.T. 4/24/15 (ECF No. 343) at 32.) The laboratory sampling results confirmed the presence of certain constituents in those areas. (*Id.*) Gormley’s consideration of

laboratory sampling results to confirm the sources and nature of constituent impacts was a scientific process. (Id.)

FOF 255. Second, Gormley “translate[d] [the AOC-by-AOC percentage allocations] into actual impacted areas....defin[ing] the impacted areas based on the constituents that were impacting the soil at that point in time and how they would be remediated.” (T.T. 4/20/15 (ECF No. 340 at 109.) This method is referred to as an IA-by-IA percentage allocation. (Id. at 110.) Golder identified twenty IAs at the North Plant. (T.T. 4/24/15 (ECF No. 343) at 56.)

FOF 256. Third, Gormley “looked at the major elements of the remediation costs and came up with a percentage for each entity for those major remediation costs to further discern what the overall percentage allocation of those responsibilities were for these firms.” (T.T. 4/20/15 (ECF No. 340 at 110-11.) This method is referred to as the “major remediation allocation percentage.” (Id. at 111.)

FOF 257. Each of the three methods used by Gormley could be used on its own—without considering the other two methods—to allocate responsibility for the contamination at the North Plant. (T.T. 4/20/15 (ECF No. 340 at 111.)

FOF 258. The percentages of responsibility derived from Gormley’s three-part methodology may be applied to all costs incurred as a result of the cleanup of the North Plant. (T.T. 4/20/15 (ECF No. 340 at 112.)

FOF 259. Gormley attempted to quantify the extent of the contribution of Greenlease and its predecessors to the impacts at the North Plant. (T.T. 4/20/15 (ECF No. 340 at 108.) Gormley explained:

I looked at the record of the operations of the site and also other information that was provided to me, including information from the plants during both the Greenlease and the Trinity operations of the facility and looked at those

operations and quantified them based on the duration that each of the firms operated at those locations or had developed in those locations, and based my assessment of the percentage of the impacts to either of the parties based on my review.

(Id.)

FOF 260. Gormley totaled the cost for remediating each IA and multiplied it by the percentage attributable to either Greenlease or Trinity to determine the dollar amount each entity was responsible for with respect to an IA. (T.T. 4/21/2015 (ECF No. 341) at 31; Table 6-2 (ECF No. 285-2) at 28; Table 7-1 (ECF No. 285-2) at 29.)

FOF 261. Gormley totaled the cost for remediating each IA by determining the cost for each major activity taken to remediate each IA. The major remediation activities identified by Gormley were: “Cap-In-Place, Asphalt Resurfacing, Metals;” “Concrete Demolition and Crushing;” “Excavate, Pre-Condition, & Off-Site Disposal, Metals;” “Excavate and Oil Site Consolidation, Metals;” “Excavate and Off-Site Disposal, VOCs/SVOCs;” “Excavate and Off-Site Disposal, PCBs;” “Backfill with Imported Clean Fill;” “Topsoil & Seeding;” “Asphalt Capping.” (Table 6-2 (ECF No. 285-2) at 28.) These categories of cost are also known as “construction costs.” (T.T. 4/21/2015 (ECF No. 341) at 33.) Gormley explained that construction costs are generally the largest costs that are going to be incurred for projects such as the cleanup at the North Plant, and, therefore, it is fair to apply the percentages of responsibility for the construction costs to all past and future response costs associated with operations and maintenance. (Id. at 33-34.)

FOF 262. The Trinity plaintiffs during the cleanup of the North Plant incurred general construction costs, e.g., costs for site preparation, site mobilization, health and safety, erosion and sediment control, which could not be attributed to a specific IA. (T.T. 4/21/2015

(ECF No. 341) at 32.) Gormley determined the amount of general response costs the Trinity plaintiffs and Greenlease were responsible for by taking the following three steps: (a) Gormley determined the cost attributable to the Trinity plaintiffs and to Greenlease for each major remediation activity taken at each IA; (b) Gormley added all costs attributable to the Trinity plaintiffs and to Greenlease for the major remediation activities, and determined the percentage of major remediation activities each entity was responsible for; (c) once Gormley determined those percentages, he applied those percentages to the general construction costs to determine the general construction costs for which each entity was responsible. (T.T. 4/21/2015 (ECF No. 341) at 32.)

FOF 263. Costs for major remediation activities, i.e., construction costs, generally are the largest costs that are going to be incurred over the “life cycle” of a cleanup. (T.T. 4/21/15 (ECF No. 341) at 33-34.) Costs for major remediation activities, therefore, are a “good indicator that if some percentage of the construction cost is related to...IAs, that it’s fair to apply those percentages to all...past response costs to get to that point, which include historical review and investigation and any future costs that are associated with operations and maintenance.” (Id.)

FOF 264. The allocation percentages originally provided by Gormley, which were not based upon actual quantity and volume, attributed 98% responsibility to Greenlease and 2% responsibility to the Trinity plaintiffs. (Table 6-2 (ECF No. 285-2) at 28.) Once Gormley made his calculations using actual cost data, which reflected the actual volumes associated with the cleanup of the North Plant, he attributed 99% responsibility to Greenlease and 1% responsibility to the Trinity plaintiffs. (T.T. 4/21/2015 (ECF No. 341) at 34-37; Table 7-1 (ECF No. 285-2) at 29.)

Gerritsen’s Allocation

FOF 265. Gerritsen opined that operations at the North Plant did not contribute to costs for response actions. (T.T. 4/27/15 (ECF No. 344) at 84.) Gerritsen considered the operations of the North Plant in reaching his conclusion, but that consideration did not change his opinion that operations at the North Plant did not contribute to costs for response actions. (Id.)

FOF 266. Gerritsen opined that the lead found by Golder at the North Plant that required a response action was from historic fill. (T.T. 4/27/15 (ECF No. 344) at 146.) Golder found that the lead above Act 2 standards was in soil samples which contained historic fill taken from either the old Erie paint shop or the main paint shop. (Id. at 147.) Golder found lead above Act 2 standards in historic fill samples taken from the paint shops. (Id.) Based upon those findings, Gerritsen concluded that the lead contamination at the North Plant that required a response action was caused by the deposit of historic fill and not painting operations. (Id.)

FOF 267. Despite Greenlease owning and operating at the North Plant for more than 75 years, Gerritsen allocated either 12 or 13 percent of responsibility to Greenlease because the majority of the lead contaminants at the North Plant was caused by the use of historic fill, for which Greenlease is not responsible. (T.T. 4/24/15 (ECF No. 343) at 126.)

FOF 268. Gerritsen does not opine that the Trinity plaintiffs caused 87 or 88 percent of the contamination at the North Plant; rather, Gerritsen opines that Greenlease is responsible for only 12 or 13 percent of the contamination at the North Plant. (T.T. 4/24/15 (ECF No. 343) at 126.)

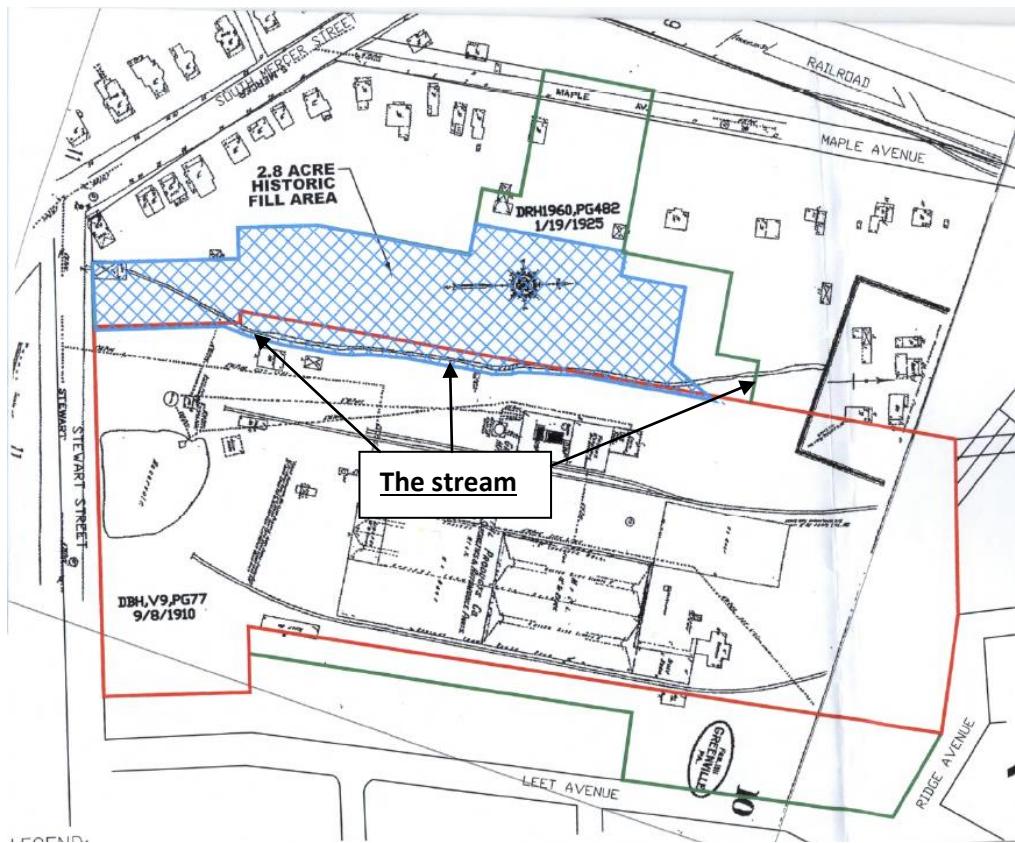
FOF 269. Gerritsen presented two alternative allocations of costs for the cleanup of contamination of the North Plant. (Greenlease Exs. Revised TTTT and VVVV.) Both allocations are premised upon Gerritsen's opinion that Greenlease is responsible for depositing 2.8 acres of

historic fill at the North Plant. (T.T. 4/24/15 (ECF No. 343) at 119.) For each allocation, Gerritsen calculated the percentage of the total number of IAs that were located inside the 2.8 acres of historic fill he opines Greenlease deposited at the North Plant and the total number of IAs that were not located within that 2.8 acres. (T.T. 4/24/15 (ECF No. 343) at 119.)

Gerritsen's Opines Greenlease Placed Historic Fill in 2.8 Acres of the North Plant

FOF 270. According to Gerritsen, Greenlease placed historic fill on 2.8 acres of the North Plant. (T.T. 4/24/2015 (ECF No. 343) at 93; Greenlease Ex. UUU; Greenlease Ex. NNNN.) Gerritsen created the following overlay map,¹⁰ which depicts in an aqua blue hatch pattern the 2.8 acres of the North Plant on which he opined Greenlease placed historic fill. The overlay map depicts that the 2.8 acres identified by Gerritsen includes a large portion of the stream that ran north to south through the center axis of the North Plant.

¹⁰ An overlay map is a map created by placing different maps on top of each other. (T.T. 4/24/15 (ECF No. 343) at 91.)

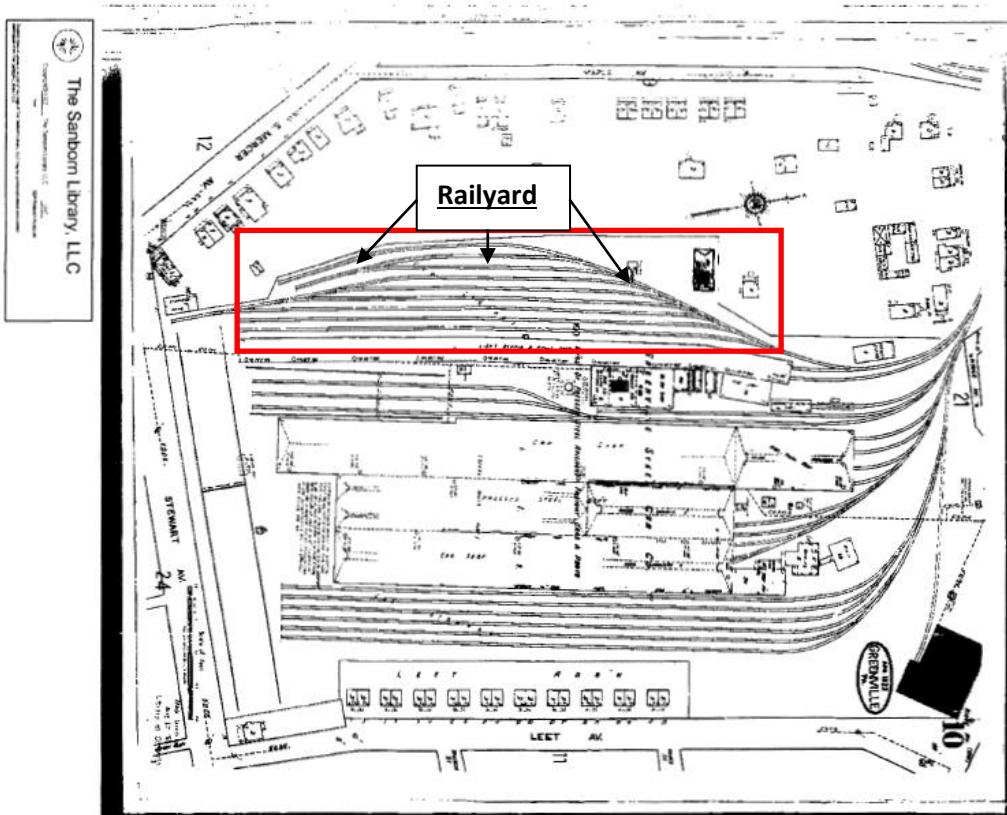


(Greenlease Ex. SSS (emphasis added, i.e., the text box and three black arrows).)

FOF 271. Gormley testified that Gerritsen's overlay map, i.e., Greenlease exhibit SSS, shows some "indication that the rail lines aren't matching up between the Sanborn map and what's called the railroad spur in [Greenlease Ex. SSS]." (T.T. 4/21/2015 (ECF No. 341) at 65.) Gormley testified that when maps used to create an overlay map do not "match up," "it brings into subjectivity any kind of area that you are going to portray based on that historic drawing. So you're going to have to take into account some additional information as well." (T.T. 4/21/2015 (ECF No. 341) at 65.)

FOF 272. According to Gerritsen, Greenlease placed historic fill in the 2.8 acre area of the North Plant to expand its operations and put a railyard in at the North Plant, which is depicted on the 1922 Sanborn map. (T.T. 4/24/15 (ECF No. 343) at 88.) Gerritsen opined that the

2.8 acre area he identified is the only area of the North Plant on which Greenlease placed historic fill. (T.T. 4/24/15 (ECF No. 343) at 93.)



(Trinity pls. Ex. 3 at TRINGRNL048769 (emphasis added, i.e., the text box, three black arrows, and red rectangle).)

FOF 273. Gormley disagrees with Gerritsen's opinion that Greenlease is responsible for only 2.8 acres of historic fill with respect to the stream depicted in the 1911 Sanborn map. (T.T. 4/21/2015 (ECF No. 341) at 65.) Gormley explained that the 2.8 acre area identified by Gerritsen on Greenlease Ex. SSS "looks very small compared to the areas of fill that [he] observed" "out on the field." Id.

FOF 274. The 2.8 acre area identified by Gerritsen does not cover the entirety of the stream. (Greenlease Ex. SSS.) Based upon the 1922 Sanborn map, however, the entirety of the stream was eliminated by 1922. (Trinity Pls. Ex. 3 at TRINGRNL048770.)

FOF 275. In 1922, Greenlease did not own all the property through which the stream ran, i.e., Greenlease did not own a northern portion of the stream. (T.T. 4/24/15 (ECF No. 343) at 87.) That portion of the stream that Greenlease did not own was placed in a culvert.¹¹ (Id.)

FOF 276. Greenlease placed the remainder of the stream that is depicted on the 1911 Sanborn map into a culvert. (T.T. 4/24/15 (ECF No. 343) at 87-88.) Greenlease placed historic fill over the culvert in that area of the North Plant. (Id. at 88.)

Gerritsen's Allocation Based Upon His Opinion that Golder Should Not Have Used a Standard Action Level to Remediate the North Plant

FOF 277. Gerritsen's first allocation with respect to lead is based upon his opinion that Golder should not have used a standard action level at the North Plant; rather, the most appropriate strategy with respect to the cleanup at the North Plant was to resurface the preexisting caps and not to excavate the materials underneath those caps. (T.T. 4/24/15 (ECF No. 343) at 126.)

FOF 278. Gerritsen modified the costs Golder incurred with respect to remediation activities to reflect what Gerritsen opined Golder would have spent at the North Plant if it capped the areas in which there were preexisting caps and did not excavate the soils in those areas. (T.T. 4/24/15 (ECF No. 343) at 120; Greenlease Ex. HHH.)

¹¹ Gerritsen explained that to culvert the stream means to place a pipe beneath the surface of the ground, i.e., in the subsurface. (T.T. 4/24/15 (ECF No. 343) at 74.)

FOF 279. With respect to VOC contamination at the old Erie paint shop and the main paint shop, Gerritsen allocated 97% responsibility to Greenlease and 3 % responsibility to the Trinity plaintiffs. (T.T. 4/24/15 (ECF No. 343) at 119.)

FOF 280. Gerritsen's total allocation of responsibility based upon his opinion that Golder should have resurfaced the preexisting concrete caps and not excavated the soils beneath the concrete caps is 12 percent to Greenlease and 88 percent to the Trinity plaintiffs. (T.T. 4/24/15 (ECF No. 343) at 122.)

Gerritsen's Allocation Based Upon His Opinion that Golder Should Not Have Used a Standard Action Level to Remediate the North Plant

FOF 281. Gerritsen's second allocation is based upon his alternative opinion that even if the use of a standard action level was proper in this case, Golder should have conducted a site characterization study "up front" and established a standard action level of 2,500 milligrams of lead per one kilogram of soil as opposed to a standard action level of 1,000 milligrams of lead per one kilogram of soil. (T.T. 4/24/15 (ECF No. 343) at 123.)

FOF 282. Gerritsen calculated the costs and allocation of responsibility for the cleanup at the North Plant if Golder would have conducted a site characterization study "up front" and established a standard action level of 2,500 milligrams of lead per one kilogram of soil. (Id.)

FOF 283. Gerritsen's calculation with respect to lead contaminants was based upon the eight areas in which the soil exceeded 2,500 milligrams of lead per one kilogram of soil. (T.T. 4/24/15 (ECF No. 343) at 123.) Gerritsen figured in his calculation that in those eight areas, the soil would have to be excavated, conditioned, and transported off site for disposal. (Id.)

FOF 284. With respect to VOC contamination at the old Erie paint shop and the main paint shop, Gerritsen allocated 97% responsibility to Greenlease and 3 % responsibility to the Trinity plaintiffs. (T.T. 4/24/15 (ECF No. 343) at 119.)

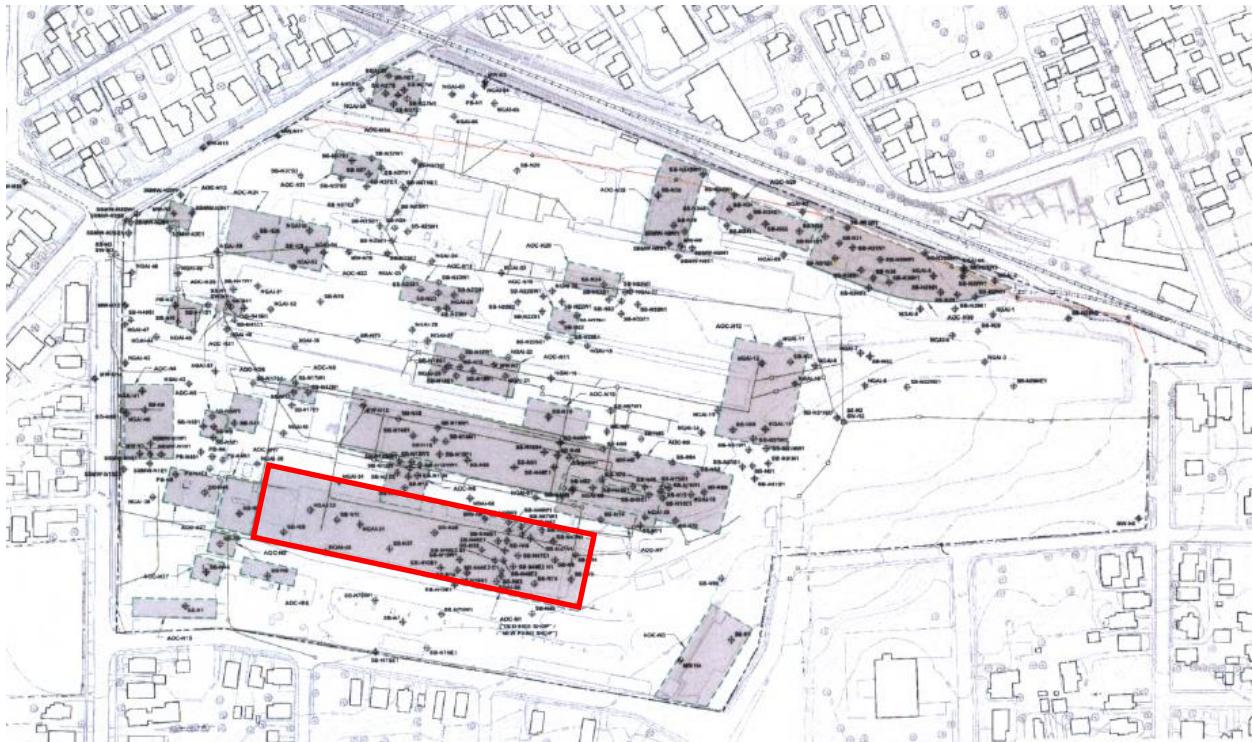
FOF 285. Gerritsen's total allocation of responsibility based upon his opinion that Golder should have conducted a site characterization study in the beginning of the cleanup to establish a site-specific standard action level of 2,500 milligrams of lead per one kilogram of soil is 13 percent to Greenlease and 87 percent to the Trinity plaintiffs. (T.T. 4/24/15 (ECF No. 343) at 122.)

Causes of Contamination at Each IA

FOF 286. AOC-N1 is the old Erie paint shop. The constituents found in surface soil¹² were VOCs, SVOCs, and lead. The constituents in subsurface soil¹³ were VOCs and lead. (T.T. 4/21/2015 (ECF No. 341) at 5.) AOC-N1 is outlined in red on the map below.

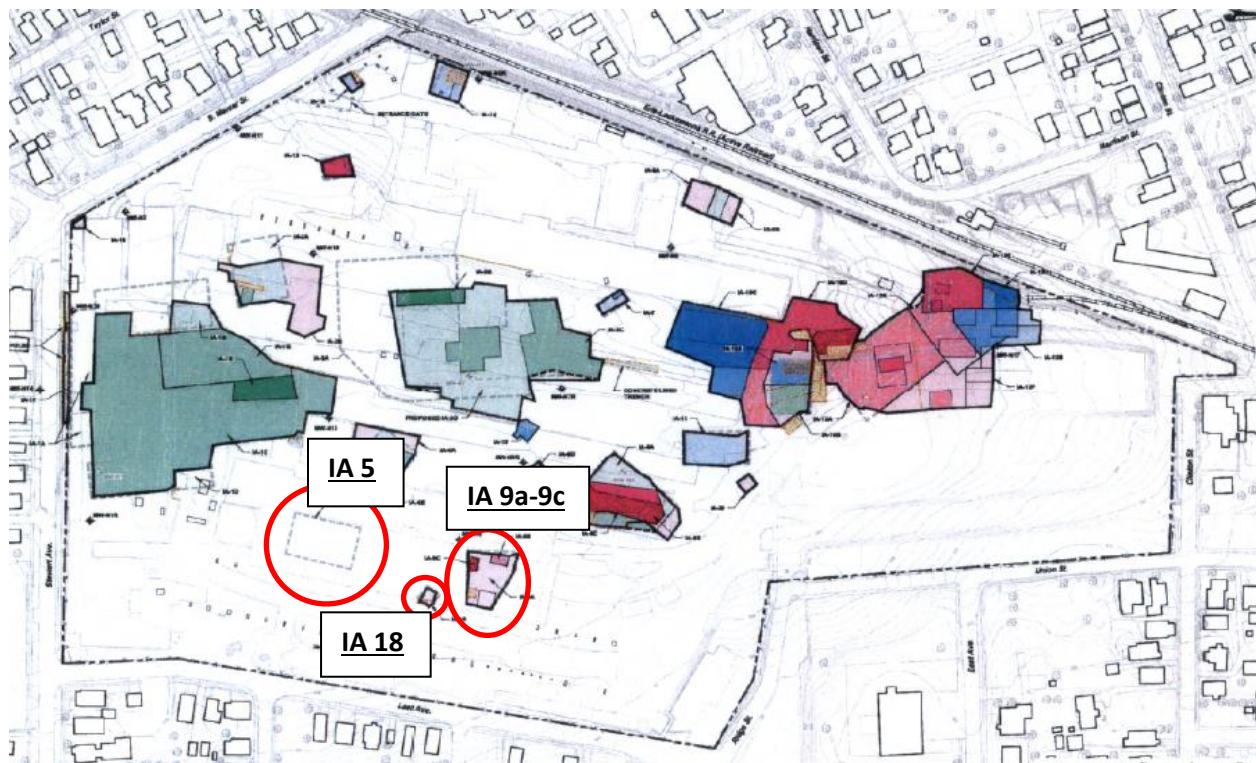
¹² Surface soil is defined by the State of Pennsylvania as zero to two feet from below the surface. (T.T. 4/23/15 (ECF No. 342) at 74.)

¹³ Subsurface soil is defined as soil two to fifteen feet from below the surface. (T.T. 4/24/15 (ECF No. 343) at 112.)



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

FOF 287. There were three IAs identified in AOC-N1, i.e., IAs 5, 9a-9c, and 18. (Trinity pls. Ex. 83.) Lead was the primary contaminant requiring remediation in IA 5. VOCs were the primary contaminant requiring remediation in IA 9a-9c. and SVOCs were the primary contaminant requiring remediation in IA 18. (Trinity pls. Ex. 14 at TRINGRNL068077-82.) The IAs identified in AOC-N1 are circled and identified on the following map.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the three text boxes and three red circles).)

AOC-N1 Lead Contamination (IA 5)

FOF 288. The Trinity plaintiffs attribute the lead contamination in AOC-N1 to Greenlease's painting operations at the old Erie paint shop, which are discussed above. (T.T. 4/21/2015 (ECF No. 341) at 5.)

FOF 289. From 1986 until 1994, the Trinity plaintiffs used the old Erie shop, which still had dirt floors, for storage, not painting. The Trinity plaintiffs built a new paint shop in place of the old Erie paint shop. (T.T. 4/20/15 (ECF No. 340) at 49; T.T. 4/21/2015 (ECF No. 341) at 74; T.T. 4/23/2015 (ECF No. 342) at 40.) Trinity excavated the dirt floors from the old Erie shop and transported the excavated soil and demolition debris to a separate plant that it owned called

the South Plant. Trinity dumped the excavated soils and demolition debris from the old Erie paint shop onto a baseball field at the South Plant. (Id. at 49.)

FOF 290. Greenlease attributes the lead contamination in AOC-N1 to historic fill placed in the area by Shelby Steel prior to Greenlease purchasing the North Plant.

FOF 291. Based upon the soil boring logs prepared by Golder and included in the Remedial Investigation Report and Updated Remedial Investigation Report, historic fill was found throughout the majority of the North Plant. (T.T. 4/24/15 (ECF No. 343) at 61; see e.g., Trinity pls. Ex. 11 at TRINGRNL058759.)

FOF 292. Gerritsen testified that 30 soil samples were taken from AOC-N1. (T.T. 4/24/15 (ECF No. 343) at 68.) 23 of the 30 samples were tested for lead contaminants. (Id.) Three of the 23 samples exhibited lead concentrations above the Act 2 standard. (Id.) Each of the 3 soil samples that exhibited lead concentrations above the Act 2 standard were collected from historic fill. (Id.) According to Gerritsen, the soil borings taken from AOC-N1 “don’t exhibit any difference from other areas that are on the site where...the source of lead is a historic fill.” (Id. at 69.) In other words, the soil samples taken at AOC-N1 correlated to the soil samples taken at other areas of the North Plant that were historic fill. (Id.) Every soil sample from AOC-N1 that had lead exceedances in it was from historic fill. (T.T. 4/24/15 (ECF No. 343) at 68-69.)

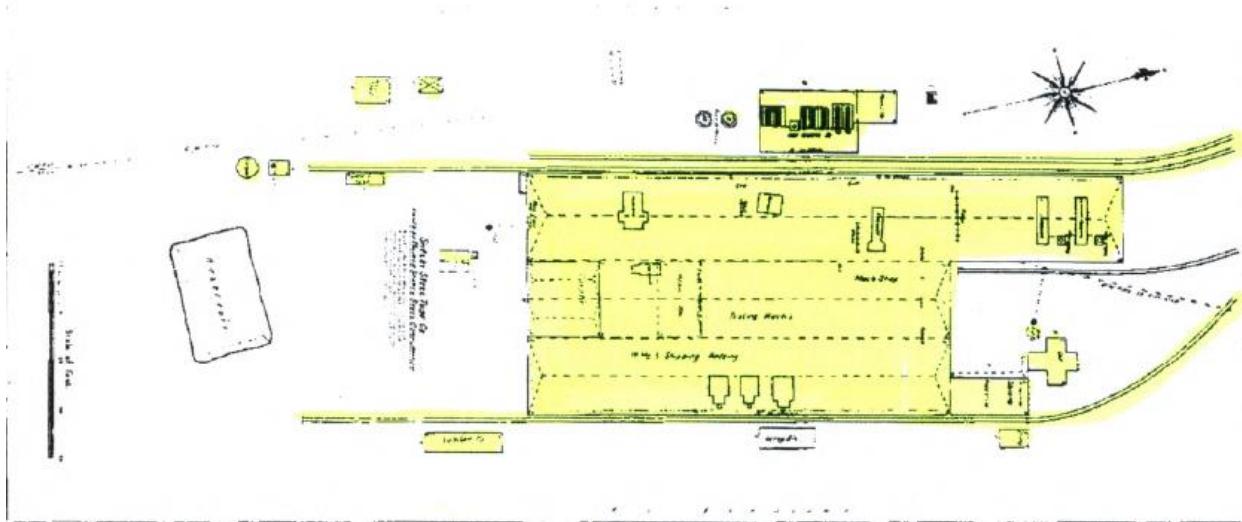
FOF 293. According to Gerritsen, the “original footprint where the paint shops are” was developed by Shelby Steel. (T.T. 4/24/15 (ECF No. 343) at 71.)

FOF 294. A Sanborn map dated 1904 (the “1904 Sanborn map”) depicts four larger buildings, six smaller buildings, i.e., “support buildings”, and at least four railroad tracks at the North Plant. (T.T. 4/24/15 (ECF No. 343) at 76.) Because the North Plant was built in a hollow, historic fill would have been placed at each of the sites upon which each of the four larger

buildings, six smaller buildings, and railroad tracks were situated. (T.T. 4/24/15 (ECF No. 343) at 76, 82.) The four larger buildings, six support buildings, and at least four railroad tracks existed prior to Greenlease owning the North Plant because they are depicted in the 1904 Sanborn map. (T.T. 4/24/15 (ECF No. 343) at 77.) The four larger buildings depicted on the 1904 Sanborn map were located close to the stream, which ran north to south through the North Plant and toward which each side of the North Plant sloped. (T.T. 4/24/15 (ECF No. 343) at 81.) Under those circumstances, Shelby Steel would have had to place historic fill to support the buildings' foundations. (T.T. 4/24/15 (ECF No. 343) at 81.)

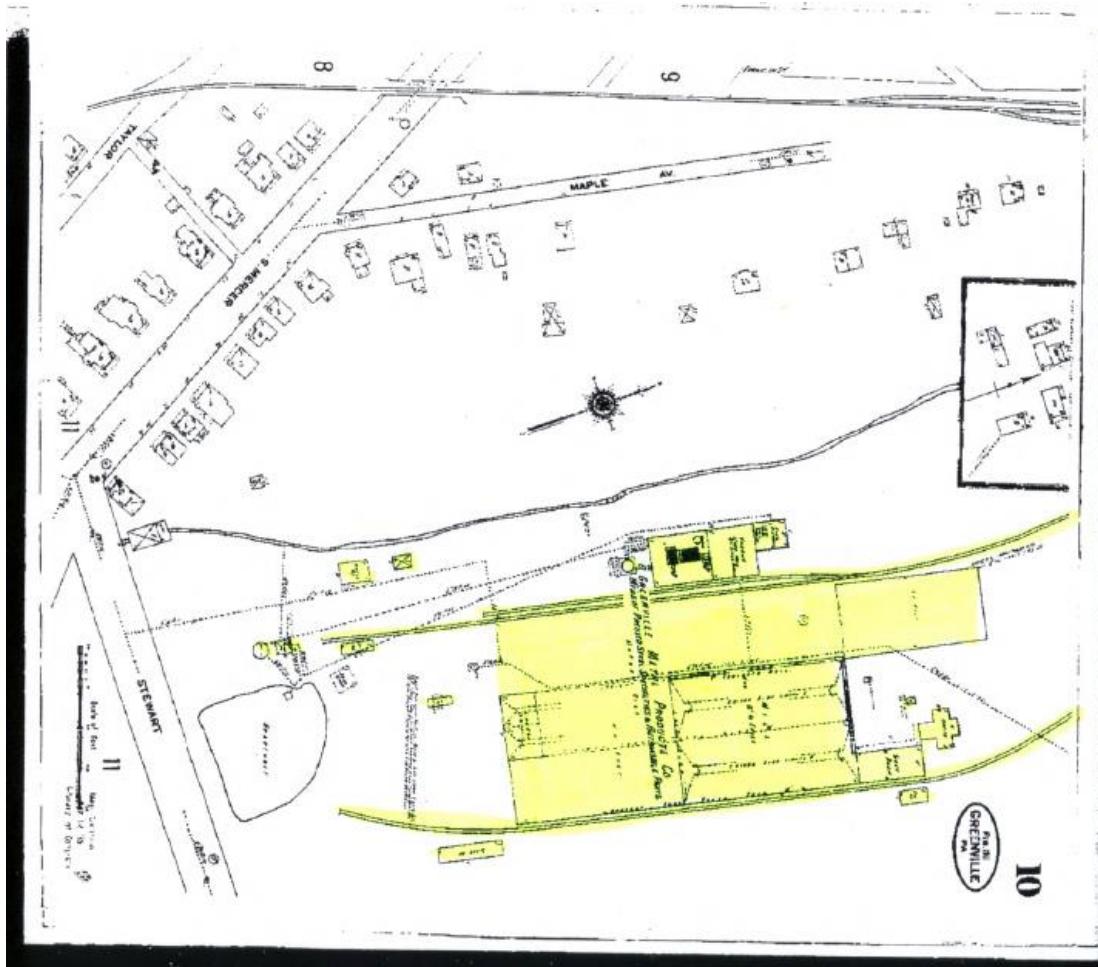
FOF 295. There are buildings depicted on the 1911 Sanborn map in the exact location on which the buildings erected by Shelby Steel are depicted on the 1904 Sanborn map. (T.T. 4/24/15 (ECF No. 343) at 78.) Those buildings are highlighted on the excerpts of the 1904 and 1911 Sanborn maps depicted below.

1904—Shelby Steel



(Trinity pls. Ex. 3 at TRINGRNL048767 (emphasis added, i.e., the yellow highlighting).)

1911-Greenlease



(Trinity pls. Ex. 3 at TRINGRNL048768 (emphasis added, i.e., yellow highlighting).)

FOF 296. According to Gerritsen, a comparison of the 1904 Sanborn map to the 1911 Sanborn map shows that Shelby Steel is responsible for the historic fill placed in the areas in which the four larger buildings, six smaller buildings, and railroad spur were located. (T.T. 4/24/15 (ECF No. 343) at 78.)

FOF 297. Gerritsen examined the soil boring logs for the areas on which the four larger buildings, six smaller buildings, and railroad tracks were located. (T.T. 4/24/15 (ECF No.

343) at 81.) Those soil boring logs showed that historic fill was found in each of those locations.

(Id.)

FOF 298. Based upon the foregoing and for the reasons explained by Gerritsen, the lead contamination that required remediation in AOC-N1 was caused by Shelby Steel placing historic fill in that location to construct its buildings prior to Greenlease owning the North Plant. The lead contamination in that area that required remediation was not caused by Greenlease's painting operations.

FOF 299. It is more likely than not that historic fill placed by Shelby Steel caused the lead contamination that required remediation in IA 5.

FOF 300. There is no cost associated with remediation in IA 5. (Trinity pls. Ex. 83.)

AOC-N1: SVOC (IA 18)

FOF 301. The SVOC found in IA 18 was benzoapyrene, which is "a ubiquitous SVOC" found in historic fill. (T.T. 4/24/16 (ECF No. 343) at 103.)

FOF 302. Based upon Greenlease's evidence that Shelby Steel placed the historic fill in IA 18 to construct its buildings prior to Greenlease owning and operating the North Plant, it is more likely than not that Shelby Steel caused the SVOC contamination in IA 18.

AOC-N1: VOC (IAs 9a-9c)

FOF 303. The "remedial driver" in the area in which the old Erie paint shop was located was VOCs. (T.T. 4/27/15 (ECF No. 344) at 145-46.) In other words, the area in which the "most painting was done over a dirt floor, the driver of the cleanup was VOCs and not lead." (Id. at 146.) SVOCs that required remediation were also found in AOC-N1. (T.T. 4/21/2015 (ECF No. 341) at 5.)

FOF 304. Gormley testified that when Golder dug beyond a certain level at the paint shop areas, ground water that had a “sheen on the water” entered the excavation. (T.T. 4/24/15 (ECF No. 343) at 20.) According to Gormley, VOCs and SVOCs caused the sheen on the water, and, therefore, that ground water had to be collected and treated offsite to be disposed. (Id.) Gormley attributed VOCs and SVOCs to Greenlease’s use of the North Plant. (Id.)

FOF 305. VOCs generally come from cleaning solutions and fuel that was used in the paint shops to move the railcars back and forth. (T.T. 4/21/2015 (ECF No. 341) at 72.) Gerritsen opined that the solvents used to clean the railcars prior to painting the railcars caused the VOC contamination at the North Plant. (T.T. 4/24/16 (ECF No. 343) at 96-97.) Gerritsen based upon “duration of use” allocated 97 percent responsibility to Greenlease for VOC and SVOC contamination at AOC-N1. (T.T. 4/24/16 (ECF No. 343) at 97.)

FOF 306. The evidence showed that it is more likely than not that in the old Erie paint shop Greenlease used solvents containing VOCs in open air over dirt floors without environmental controls and the Trinity plaintiffs used the old Erie paint shop for storage.

FOF 307. AOC-N4 and AOC-N5 are the former reservoir area and former fuel oil underground storage tank. The constituents of concern in those areas were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 6.) Gormley allocated 100% to Greenlease and 0% to the Trinity plaintiffs for all constituents of concern. (Id.) AOC-N4 and AOC-N5 are outlined in red on the map below.

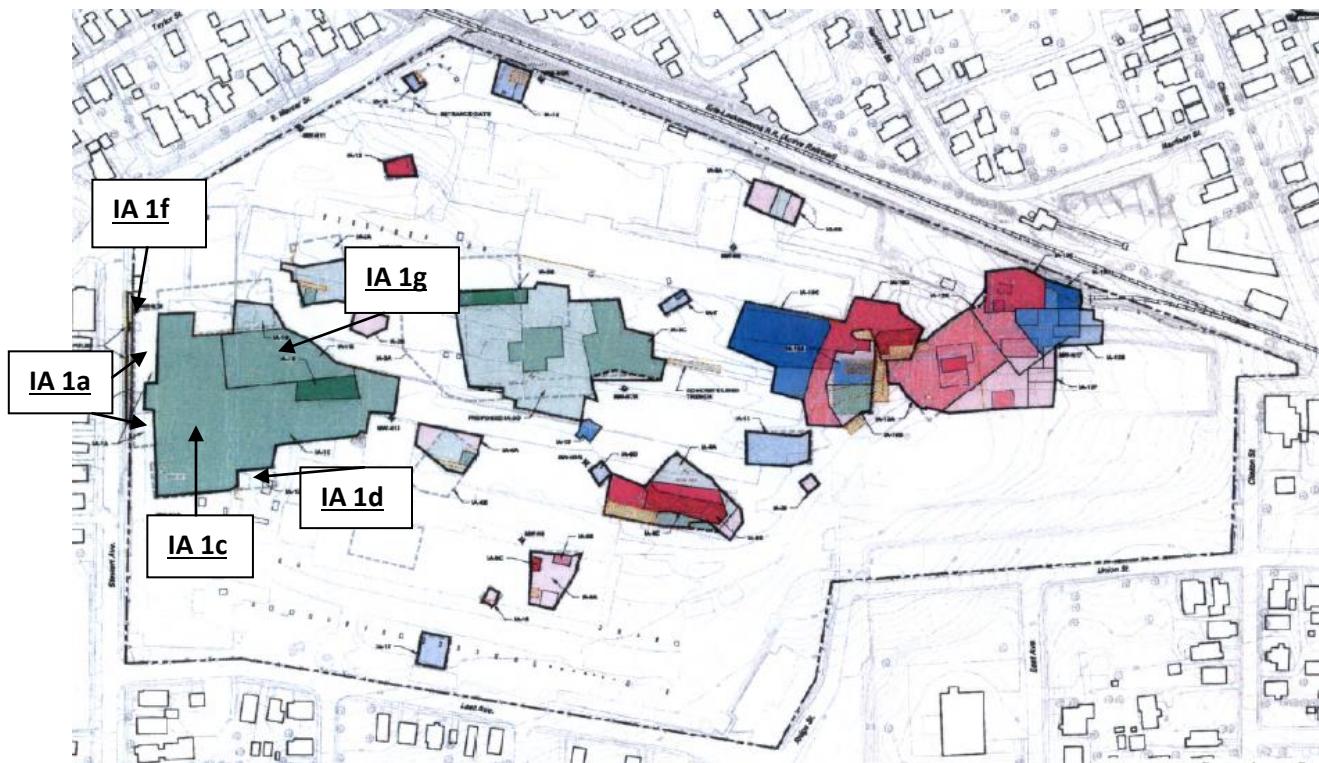
FOF 308.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the two text boxes and two red rectangles).)

FOF 309. AOC-N4 is comprised of two IAs, i.e., IAs 1a and 1f. (Trinity pls. Ex. 14 at TRINGRNL068077-82.) The primary contaminant in IAs 1a and 1f was lead. (Id.)

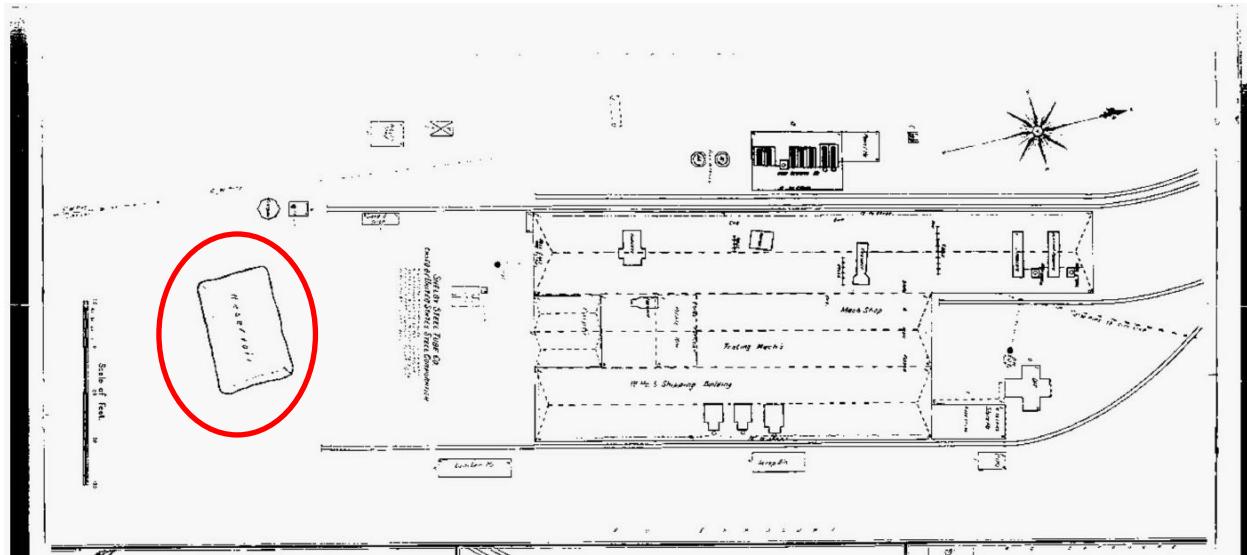
FOF 310. AOC-N5 is comprised of three IAs, i.e., IAs 1c, 1d, and 1g. (Trinity pls. Ex. 14 at TRINGRNL068077-82.) The primary contaminant in IA 1c, 1d, and 1g was lead. (Id.) The IAs identified in AOC-N4 and AOC-N5 are identified in the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the five text boxes and six black arrows).)

FOF 311. The reservoir is not depicted on the Sanborn map dated 1896 (the “1896 Sanborn” map), a time during which Shelby Steel owned the North Plant. (T.T. 4/27/15 (ECF No. 344) at 25-26; Trinity Pls. Ex. 22 at TRINGRNL053055.)

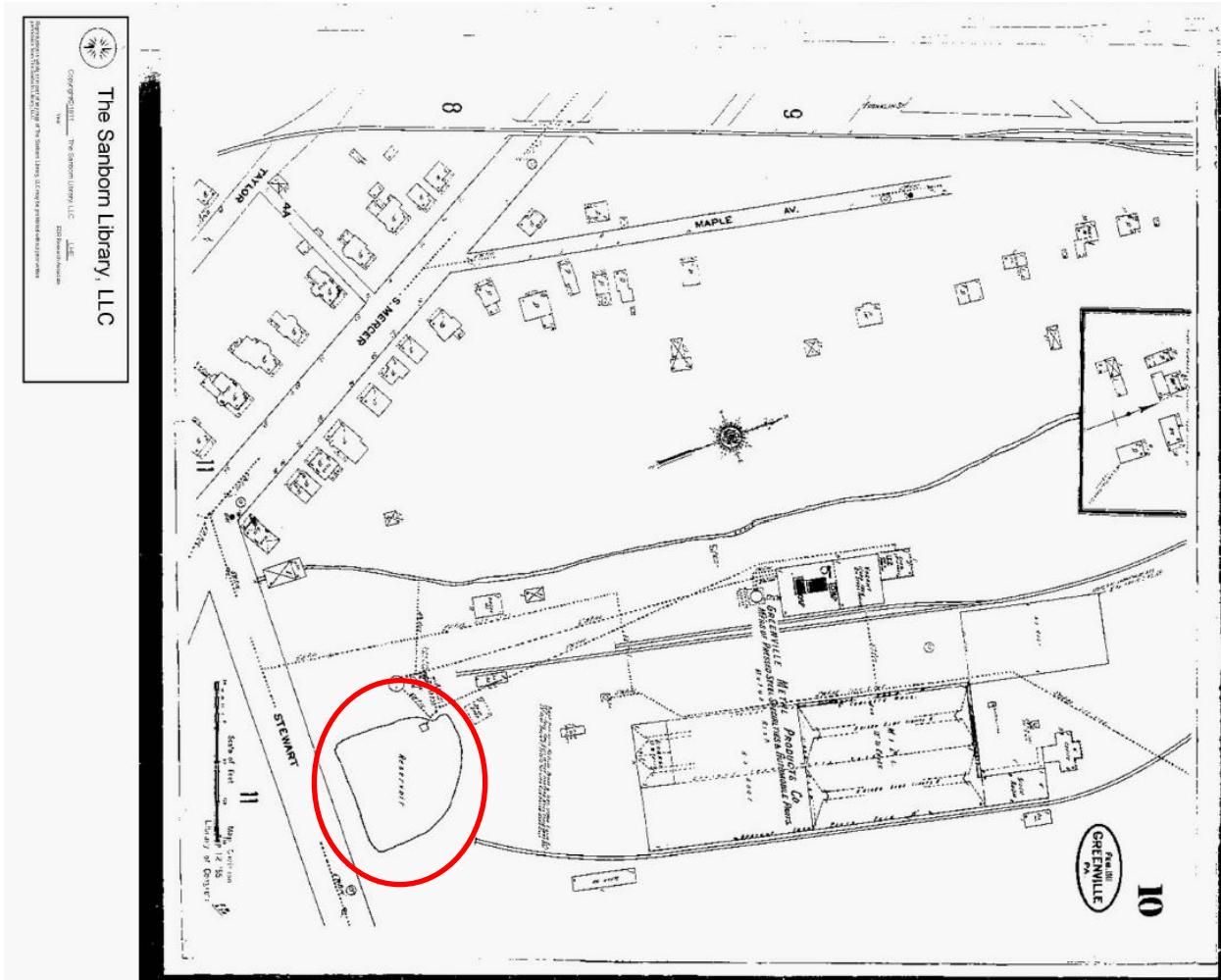
FOF 312. The reservoir is first depicted in the 1904 Sanborn map, a time during which Shelby Steel owned the North Plant. (T.T. 4/27/15 (ECF No. 344) at 27; Trinity Pls. Ex. 22 at TRINGRNL053056.)



(Trinity pls. Ex. 3 at TRINGRNL048767 (emphasis added, i.e., the red oval).)

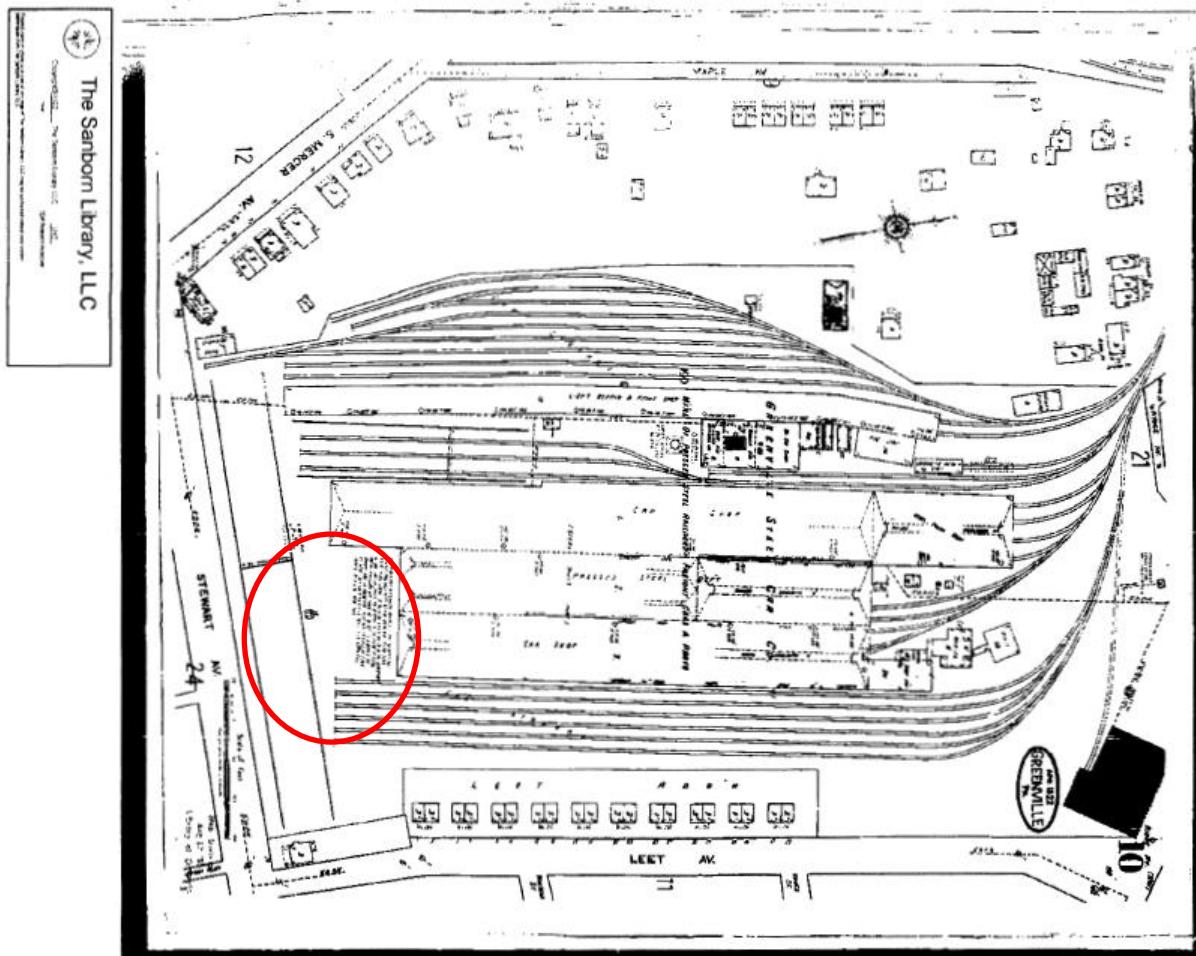
FOF 313. Gormley testified that the reservoir was eliminated by Greenlease filling it in with historic fill because the reservoir was depicted in earlier Sanborn maps, and in later Sanborn maps, there were buildings and other industrial facilities built over the area on which the reservoir was previously depicted. (T.T. 4/21/2015 (ECF No. 341) at 58.)

FOF 314. The reservoir is depicted in the 1911 Sanborn map.



(Trinity pls. Ex. 3 at TRINGRNL048768 (emphasis added, i.e., the red oval).)

FOF 315. The reservoir is not depicted on the 1922 Sanborn map; rather, there are buildings depicted in the former location of the reservoir.



(Trinity pls. Ex. 3 at TRINGRNL048769 (emphasis added, i.e., the red oval).)

FOF 316. In the area in which the reservoir was located on previous Sanborn maps, Golder discovered up to six feet of fill. (T.T. 4/21/2015 (ECF No. 341) at 59.) Gormley explained:

And I know this because there was fill that was adjacent to the sidewalks and to the facility which were right next to a four-foot wall at the plant, which was the location of the former floor of the building that was next to that sidewalk.

So that wall was about four feet in height, and there was fill beneath those slabs. So the four-foot wall, then a two-foot excavation in an area next to the wall, six-foot fill area.

(Id.)

FOF 317. Gerritsen, however, testified that the reservoir was shallow and was not a “large fill area.” (T.T. 4/21/2015 (ECF No. 341) at 58.)

FOF 318. Gerritsen opines that the reservoir was constructed after historic fill was placed at the North Plant and was not “scooped out” of the native soil. (T.T. 4/24/15 (ECF No. 343) at 82-83.) Gerritsen explained:

So you can look at all the boring logs and have the surface elevation of the borings. So you know that the ground surface in that area is flat. So then you look at the depth of fill to determine if there's patterns that would indicate that all of a sudden in a particular area the borings have an anonymously deeper fill depth.

...
But the results show...that there isn't any type of pattern of increased fill depth that would be representative of a reservoir.

...
Because the reservoir was constructed after fill was in place, whether it was a shallow reservoir that was at grade or if it was built up and burned similar to what you find oil and gas incumbents now, we don't have that information.

What I do know is that it wasn't scooped out of the natural soil. So therefore, in that area the soil borings show that we have two, three, four feet of fill, and it would have been constructed within that.

So it wasn't a deep reservoir; so therefore, the volume is not a significant volume for removal. And so by the time they would have developed it, regrading the site, they would have just incorporated it in.

(Id.)

FOF 319. In other words, Gerritsen opined that “there's no evidence that Greenlease placed fill to abandon that reservoir.” (T.T. 4/24/15 (ECF No. 343) at 83-84.)

FOF 320. Gerritsen evaluated the soil borings within the footprint and outside the footprint of the reservoir, focusing on the depth of the historic fill in the soil borings. (T.T. 4/24/15 (ECF No. 343) at 132.) Gerritsen observed that there was not an increase in the depth of fill in the area inside the footprint of the reservoir. (Id.) Gerritsen concluded based upon those observations that historic fill was placed in the area in which the reservoir was later constructed. In other words, the reservoir was constructed within the historic fill previously placed in that area or on top of the historic fill. (Id.) Gerritsen does not opine that either the stream or reservoir were filled in by Shelby Steel. (T.T. 4/27/15 (ECF No. 344) at 32.)

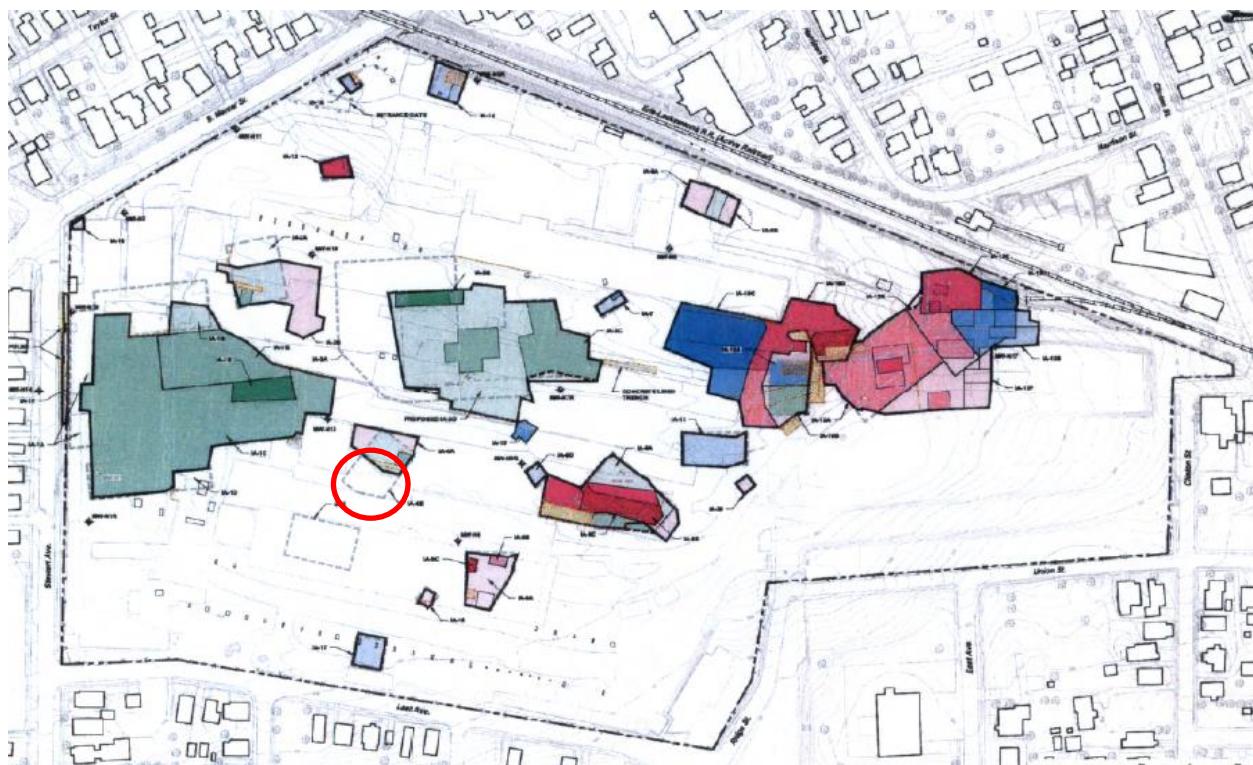
FOF 321. The 1904 Sanborn map shows that the reservoir existed when Shelby Steel owned the North Plant. The 1911 Sanborn map shows that the reservoir existed after Greenlease began its operations at the North Plant in 1910. The reservoir is not depicted in the 1922 Sanborn map; rather, the 1922 Sanborn map shows that Greenlease erected buildings atop of the former location of the reservoir. Historic fill was found in the location of the former reservoir. Under those circumstances, it is more likely than not that Greenlease filled in the reservoir with historic fill, which caused the lead contamination in IAs 1a, 1c, 1d, 1f, and 1g.

FOF 322. AOC-N6 is the former pickling room. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. There were also VOCs and SVOCs found in the subsurface soil at this AOC. (T.T. 4/21/2015 (ECF No. 341) at 6.) AOC-N6 is outlined in red on the map below:



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red square).)

FOF 323. There is one IA in AOC-N6, i.e., IA 4b. (Trinity pls. Ex. 14 at TRINGRNL068077-82.) Lead was the primary contaminant requiring remediation in IA 4b. (Id.) IA 4b is identified on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

FOF 324. The former pickling room appears to be a small area situated between the old Erie paint shop and the main paint shop. (Trinity pls. Ex. 16 at TRINGRNL070576.)

FOF 325. According to Gormley, the pickling room was used for steel manufacturing. (Trinity pls. Ex. 12 at TRINGRNL067544.) Shelby Steel manufactured steel at the North Plant. (T.T. 4/23/15 (ECF No. 342) at 74-75.) It is unclear whether or how Shelby Steel's manufacture of steel in the pickling room caused contamination requiring remediation in this area of concern.

FOF 326. Gormley opines that the former pickling room was used for "metal fabrication, railcar fabrication, cleaning and painting over dirt floors." (Trinity pls. Ex. 12 at TRINGRNL067544.) These are the same kind of activities in which Greenlease engaged in the old Erie paint shop and the main paint shop, between which the former pickling room is located.

FOF 327. AOC-N6 is part of the area of the North Plant in which Shelby Steel placed historic fill to construct its buildings in the hollow prior to Greenlease owning the property; indeed, the soil boring logs taken from AOC-N6 show that historic fill was found in eight soil samples taken from that area. (Trinity pls. Ex. 11 at TRINGRNL058692-99; Trinity pls. Ex. 16 at TRINGRNL070576.)

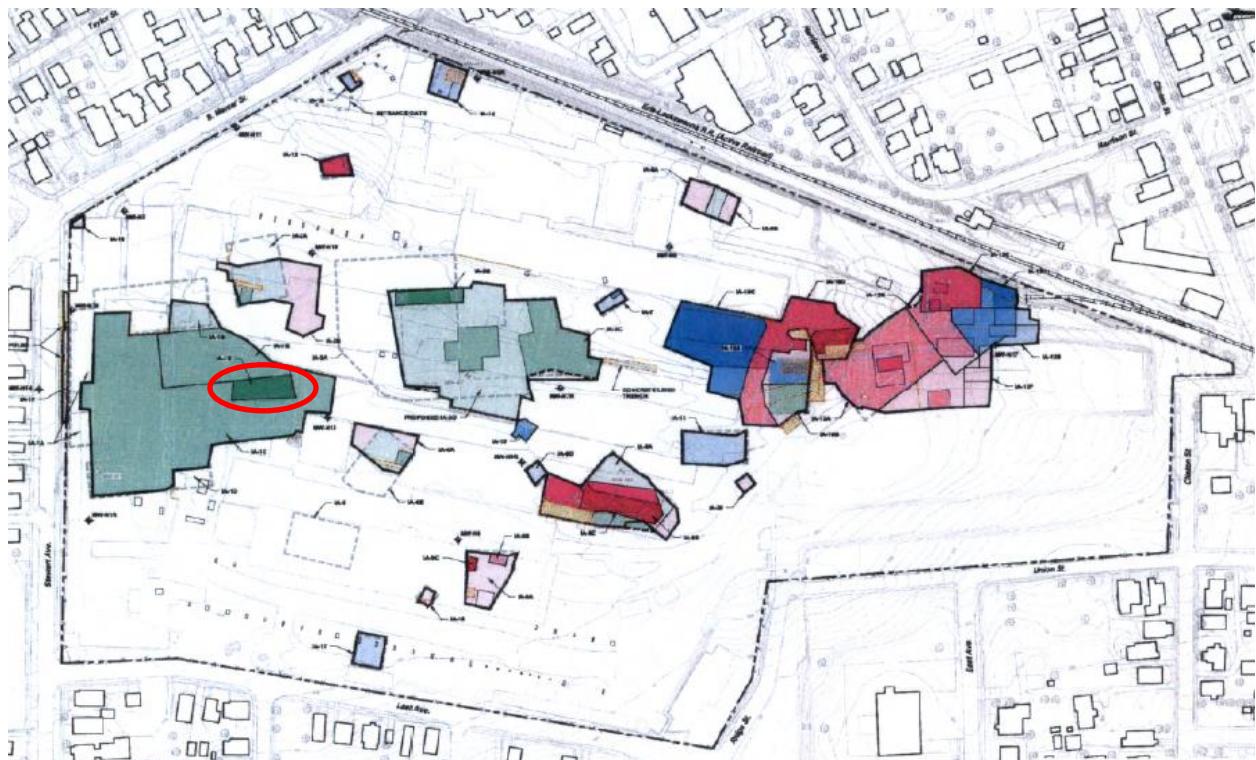
FOF 328. Based upon the foregoing, it is more likely than not that the lead contamination requiring remediation in IA 4b was caused by Shelby Steel placing historic fill in that area to construct its buildings.

FOF 329. AOC-N8 is the southcentral transformer area. Gormley allocated 100% responsibility to Greenlease and 0% responsibility to the Trinity plaintiffs for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 6.) AOC-N8 is outlined in red on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

FOF 330. There was one IA in AOC-N8, i.e., IA 1e. (Trinity pls. Ex. 83.) Lead was the primary contaminant requiring remediation in IA 1e. (Trinity pls. Ex. 14 at TRINGRNL060878.) IA 1e is circled in red on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red oval).)

FOF 331. AOC-N8 is located to the south of the main paint shop. (Trinity pls. Ex. 16 at TRINGRNL070576; Trinity pls. Ex. 38.)

FOF 332. According to Gormley, the southcentral transformer area was used for "electrical distribution related to Central Paint Shop." (Trinity pls. Ex. 12 at TRINGRNL067544.)

FOF 333. According to Gormley, the lead impacts in AOC-N8 were "likely due to drainage from upgradient painting areas in Central Paint Shop or upgradient truck

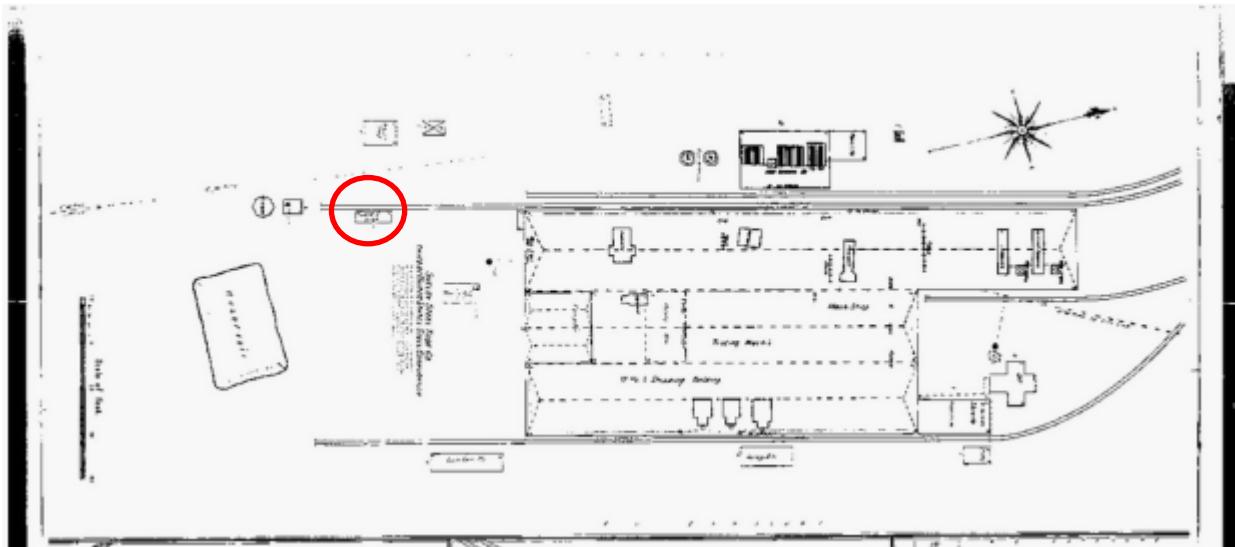
assembly/touch up painting in Morgan Shop through overland flow and storm sewers.” (Trinity pl. Ex. 12 at TRINGRNL067544.)

FOF 334. The soil boring logs from all five soil bores taken from in and around AOC-N8 show that historic fill was found in that area; indeed, AOC-N8 is just south of the main paint shop, which was built upon historic fill placed by Shelby Steel. (Trinity pls. Ex. 11 at TRINGRNL058710-14.)

FOF 335. A comparison of the map created by Golder to show the locations of the various AOCs at the North Plant and the 1904 Sanborn map shows that Shelby Steel constructed a building in the location identified by Golder as AOC-N8 and IA 1e. Shelby Steel would have placed historic fill prior to constructing that building. (T.T. 4/24/15 (ECF No. 343) at 76.)



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)



(Trinity pls. Ex. 3 at TRINGRINL048767 (emphasis added, i.e., the red circle).)

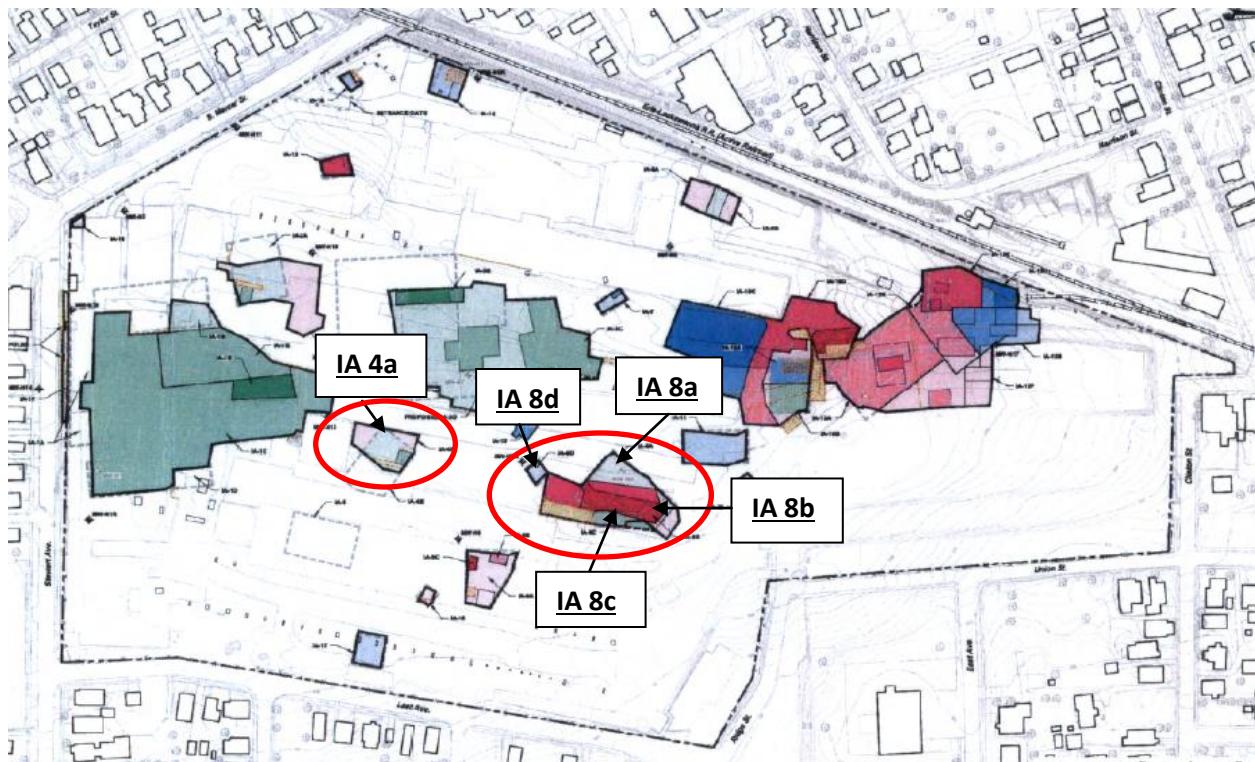
FOF 336. Based upon the foregoing, it is more likely than not that the lead contamination in IA 1e that required remediation was caused by historic fill placed by Shelby Steel to build upon the hollow in which the North Plant was developed.

FOF 337. AOC-N9 is the central or main paint shop. Gormley allocated 97% responsibility to Greenlease and 3% responsibility to the Trinity plaintiffs for methylene chloride, total xylene, antimony, iron, and manganese. Gormley allocated 100% responsibility to Greenlease and 0% responsibility to the Trinity plaintiffs for lead, ethylbenzene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene. The constituents of concern in AOC-N9 were metals and VOCs in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 6-7.) AOC-N9 is outlined in red on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

FOF 338. There are five IAs in AOC-N9, i.e., IAs 4a and 8a-8d. (Trinity pls. Ex. 83.) The primary contaminant that required remediation in IA 4a was lead. (Trinity pls. Ex. 14 at TRINGRNL068079.) The primary contaminant that required remediation in IA 8a was lead. (Trinity pls. Ex. 14 at TRINGRNL068079.) The primary contaminant that required remediation in IAs 8b and 8c was VOCs. (Id.) The primary contaminant that required remediation in IA 8d was lead. (Id.) (Trinity pls. Ex. 14 at TRINGRNL068079.) IAs 4a and 8a-8d are identified on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the five text boxes, two red ovals, and five black arrows).)

AOC-N9: Lead Contamination (IAs 4a, 8a, and 8d)

FOF 339. The painting procedures used by Greenlease employees and described by Fell, among others, in the old Erie paint shop were also used by Greenlease employees in the main paint shop. (ECF No. 328 at 35-36.) The main paint shop had dirt floors and did not have paint booths at the time of Greenlease's operation of the North Plant. (*Id.* at 35.)

FOF 340. The Trinity plaintiffs used the same painting practices as Greenlease in the main paint shop for two years, which included painting with lead paint and on dirt floors. (T.T. 4/23/15 (ECF No. 342) at 35, 40.) Trinity did not, however, paint in open areas of the North Plant. (*Id.* at 35-36.) The lead paint used by the Trinity plaintiffs would have contained some amount of lead. (T.T. 4/24/15 (ECF No. 343) at 36.) The amount of lead contained in the paints

used by the Trinity plaintiffs was lower than the amount of lead in the paint used by Greenlease because at the time the Trinity plaintiffs owned the North Plant, the environmental standards had changed for use of lead-based paint and lead-based paint was being phased out, i.e., instead of the paint containing tens of thousands parts of lead per million, it contained hundreds of parts of lead per million. (Id.) The lead based paint with hundreds of parts of lead per million would not have—if at all—more than a minimal environmental impact. (Id.)

FOF 341. There were approximately 30 soil borings taken from AOC-N9. (T.T. 4/24/15 (ECF No. 343) at 69.) Fifteen of those samples were tested for lead. (Id. at 69-70.) Five of the 15 samples exceeded the Act 2 standard of 450. (Id. at 70.) Three of those five samples exceeded the Act 2 standard of 1,000. (Id.) Each of those five samples contained historic fill. (Id.)

FOF 342. Gerritsen noted that in the later phases of Golder's investigation, it did not analyze lead at the paint shops; rather, Golder targeted VOCs in those areas. (T.T. 4/24/15 (ECF No. 343) at 70.) According to Gerritsen, Golder not targeting lead in the areas of the paint shops "is another testament that lead was not a pervasive contaminant in the paint shops." (Id.)

FOF 343. AOC-N9 and the IAs identified in AOC-N9 are within the footprint of the buildings erected by Shelby Steel prior to Greenlease owning and operating the North Plant. See ¶¶ 266-67 supra.

FOF 344. Based upon the foregoing, and for the same reasons articulated with respect to the IAs in AOC-N1, the evidence presented is not sufficient for the court to conclude that the lead contamination that required remediation in IAs 4a, 8a, and 8d was caused by Greenlease's painting operations at the North Plant.

AOC-N9: VOC Contamination (IAs 8d and 8c)

FOF 345. Gerritsen opined that the solvents used to clean the railcars prior to painting the railcars caused the VOC contamination at the North Plant. (T.T. 4/24/16 (ECF No. 343) at 96-97.)

FOF 346. As discussed above, VOCs generally come from cleaning solutions and fuel that were used in the paint shops to move the railcars back and forth. (T.T. 4/21/2015 (ECF No. 341) at 72.)

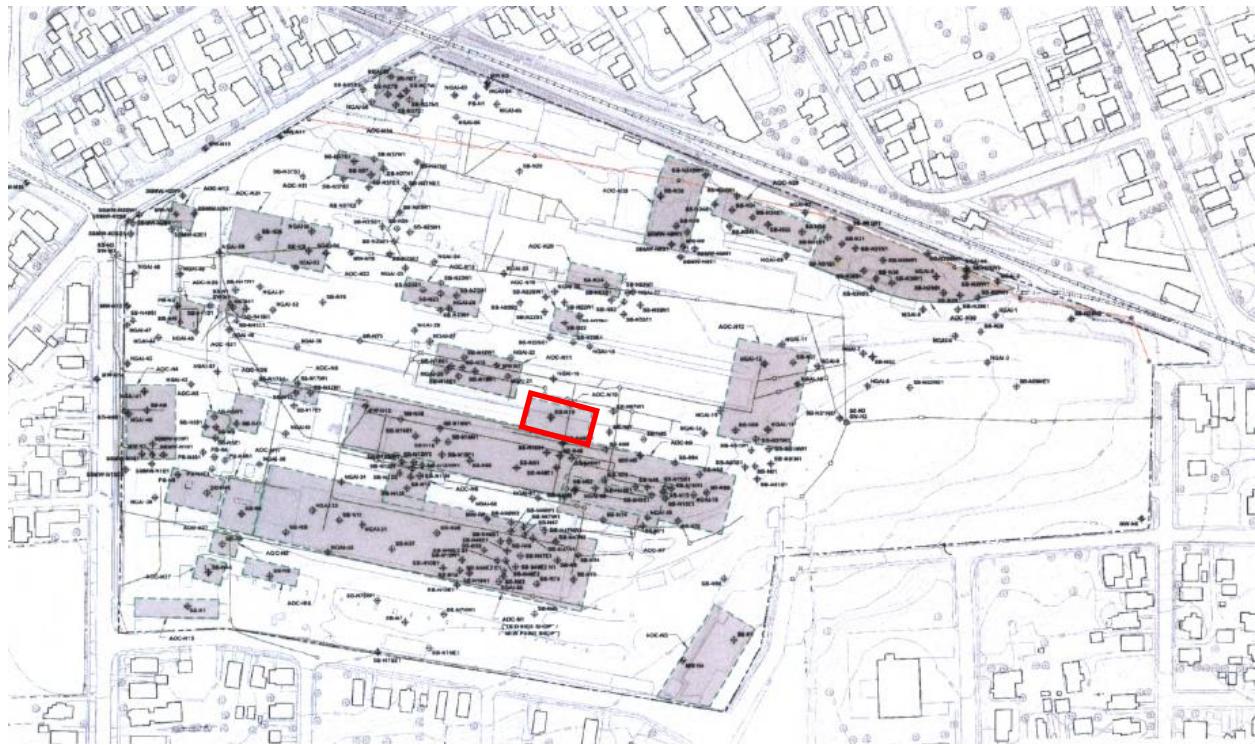
FOF 347. Gerritsen opined that the solvents used to clean the railcars prior to painting the railcars caused the VOC contamination at the North Plant. (T.T. 4/24/16 (ECF No. 343) at 96-97.)

FOF 348. Gerritsen based upon “duration of use” allocated 97 percent responsibility to Greenlease for VOC contamination at AOC-N9. (T.T. 4/24/16 (ECF No. 343) at 97.)

FOF 349. Gormley also allocated 97 percent responsibility to Greenlease for VOC contamination at AOC-N9. (T.T. 4/21/2015 (ECF No. 341) at 6-7.)

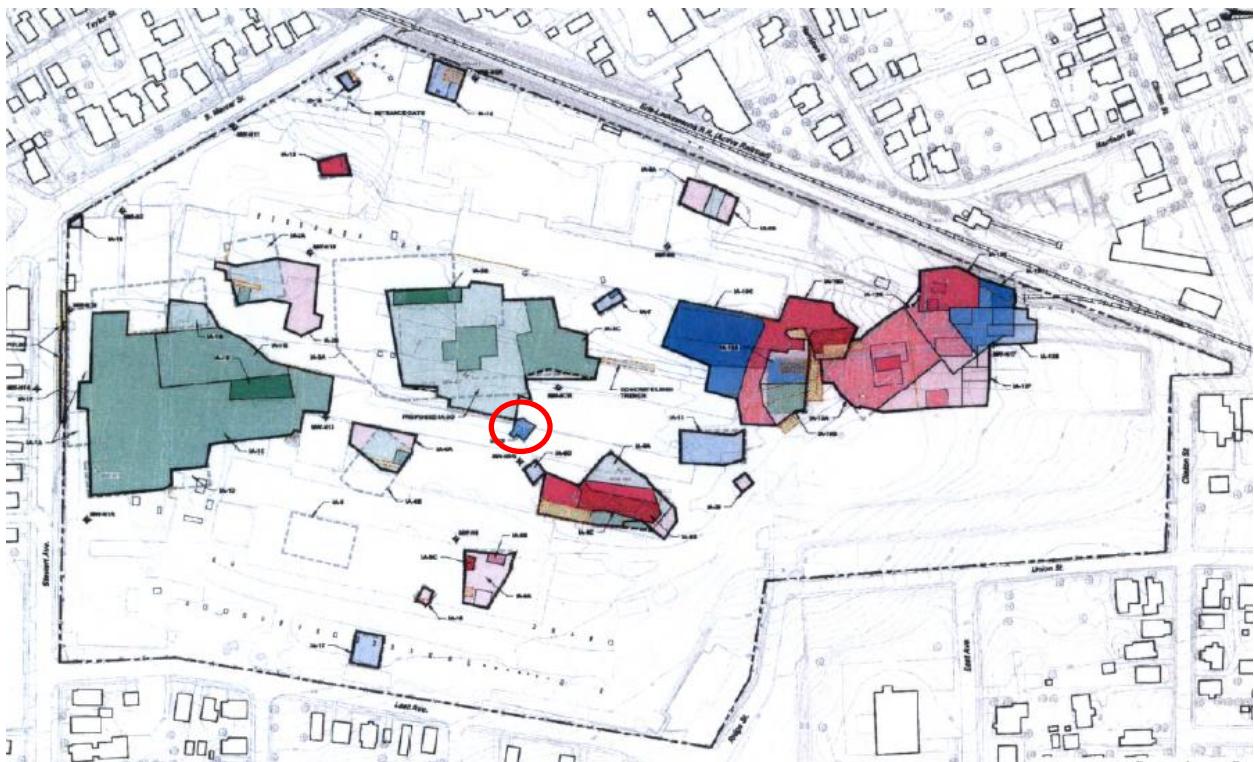
FOF 350. Based upon the evidence of record and the parties’ agreement with respect to the allocation of responsibility for the VOC contamination that required remediation in AOC-N9, it is more likely than not that Greenlease’s painting operations caused 97% of the VOC contamination that required remediation in IAs 8b and 8c and the Trinity plaintiffs are responsible for 3% of the VOC contamination that required remediation in IAs 8b and 8c.

FOF 351. AOC-N10 is the former boiler/power house. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. There were no constituents of concern in the surface soil. There were metals in the subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 7.) AOC-N10 is outlined in red on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

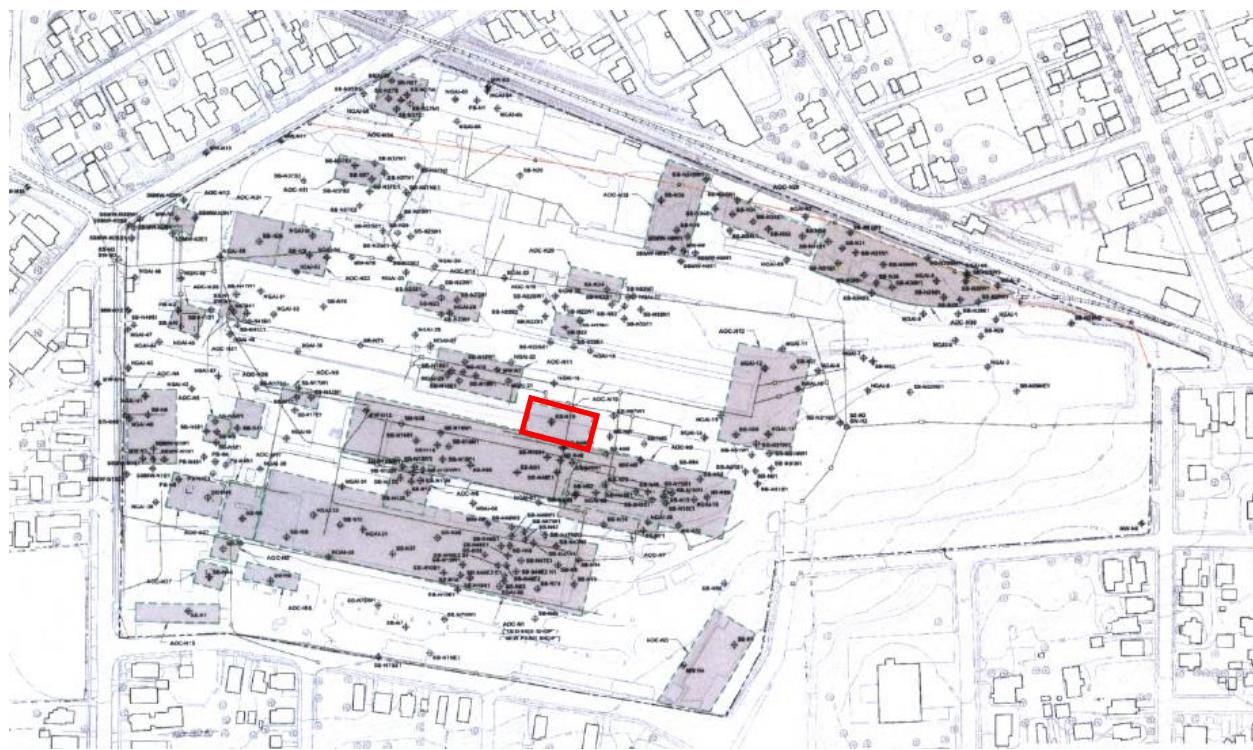
FOF 352. There is one IA in AOC-N10, i.e., IA 19. (Trinity pls. Ex. 83.) The primary contaminant that required remediation in IA 19 was lead. (Trinity pls. Ex. 14 at TRINGRNL068082.) IA 19 is circled on the map below.



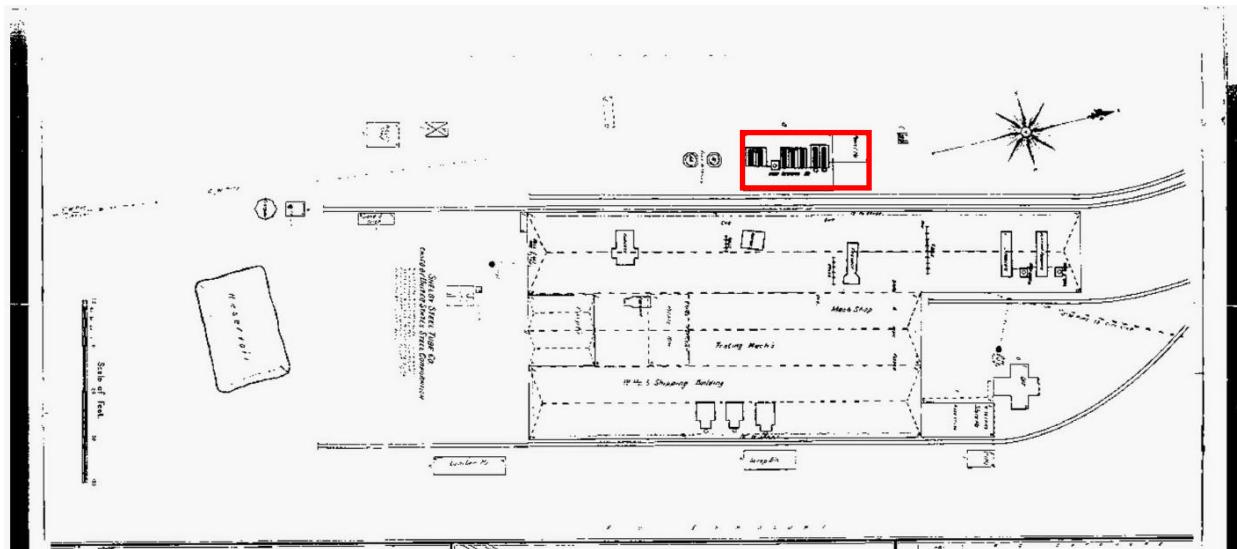
(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

FOF 353. Gormley opines that the lead contaminants that required remediation in AOC-N10 were likely caused by historic fill placed by Greenlease. (Gormley's Updated Expert Report, Table 4-1 at TRINGRNL058293.)

FOF 354. A comparison of the map created by Golder to show the locations of the various AOCs at the North Plant and the 1904 Sanborn map shows that Shelby Steel constructed a structure in the location identified by Golder as AOC-N10 and IA 19. Shelby Steel would have placed historic fill prior to constructing that building. (T.T. 4/24/15 (ECF No. 343) at 76.)



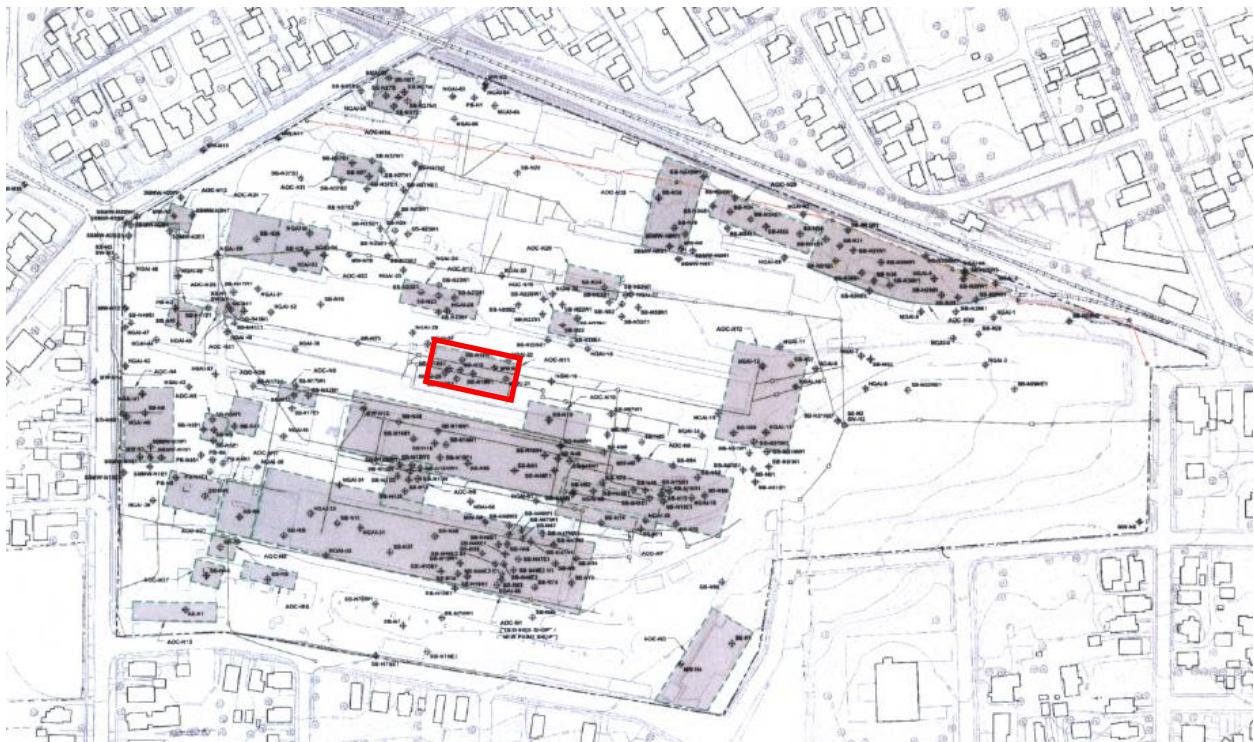
(Trinity pls. Ex. 3 at TRINGRINL048767(emphasis added, i.e., the red rectangle).)



(Trinity pls. Ex. 3 at TRINGRINL048767) (emphasis added, i.e., the red rectangle).)

FOF 355. Based upon the foregoing, the evidence, it is more likely than not that the lead contamination that required remediation in IA 19 was caused by historic fill placed by Shelby Steel to build upon the hollow in which the North Plant was developed.

FOF 356. AOC-N11 is the former paint shop. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 7.) AOC-N11 is outlined on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle.))

FOF 357. AOC-N11 has three IAs, i.e., IAs 3a-3c. (Trinity pls. Ex. 83.) The primary contaminant that required remediation in IAs 3a-3c was lead. (Trinity pls. Ex. 14 at TRINGRNL068078-79.) IAs 3a-3c are identified on the map below.



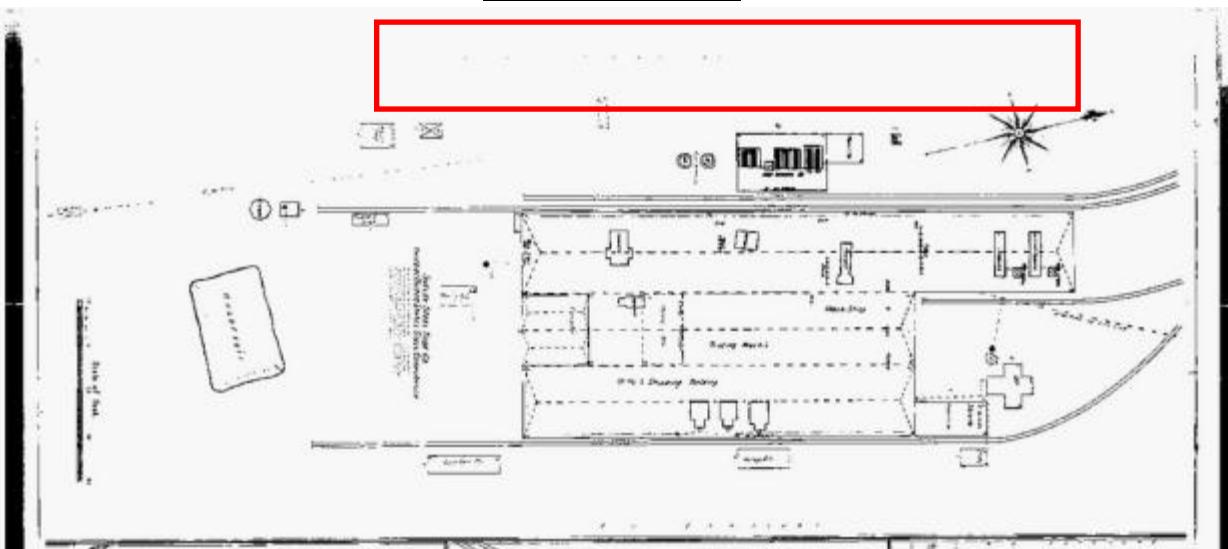
(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the three text boxes and three black arrows).)

FOF 358. At least five soil borings were taken from AOC-N11. (Trinity pls. Ex. 16 at TRINGRNL070576.) The soil boring logs from each of those five soil borings show that historic fill was retrieved from AOC-N11. (Trinity pls. Ex. 11 at TRINGRNL058715-19.)

FOF 359. Gerritsen concedes that Greenlease is 100% responsible for the historic fill that caused lead contamination that required remediation in IA 3b. (Greenlease Exs. Revised TTTT and VVVV.)

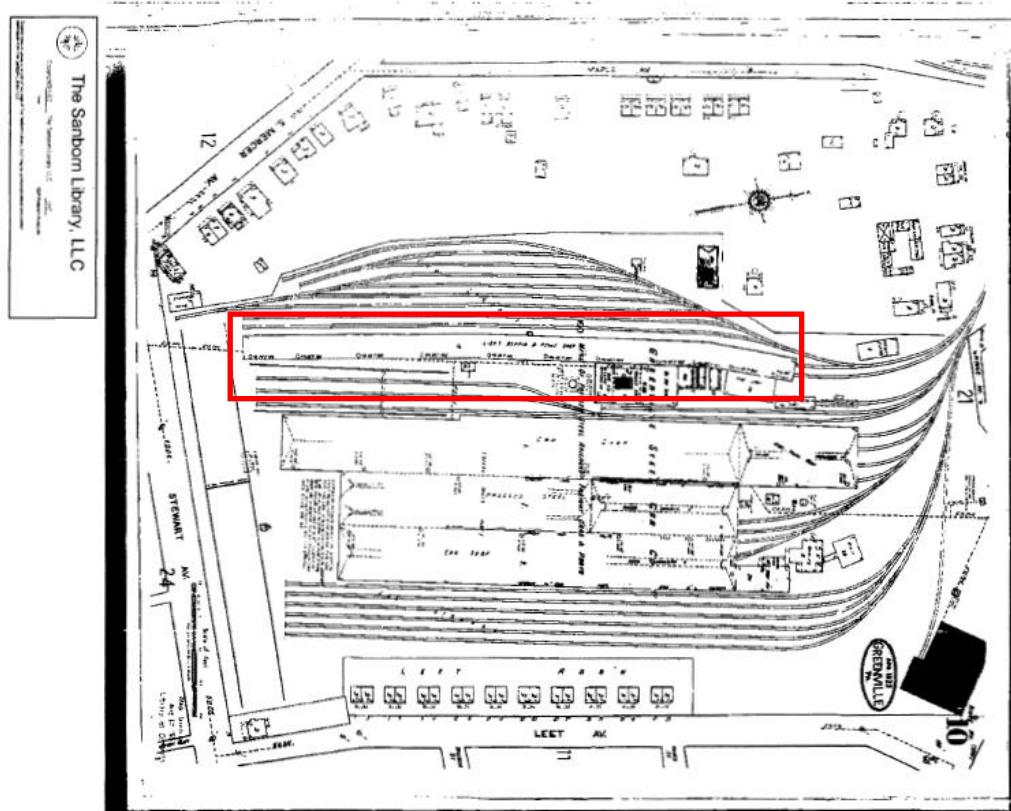
FOF 360. A comparison of the 1904 Sanborn map and the 1922 Sanborn map shows that Greenlease constructed the former paint shop, i.e., the former paint shop was not depicted on the 1904 Sanborn map but is depicted on the 1922 Sanborn map.

1904 Sanborn map



(Trinity pls. Ex. 3 at TRINGRNL048767 (emphasis added, i.e., the red rectangle).)

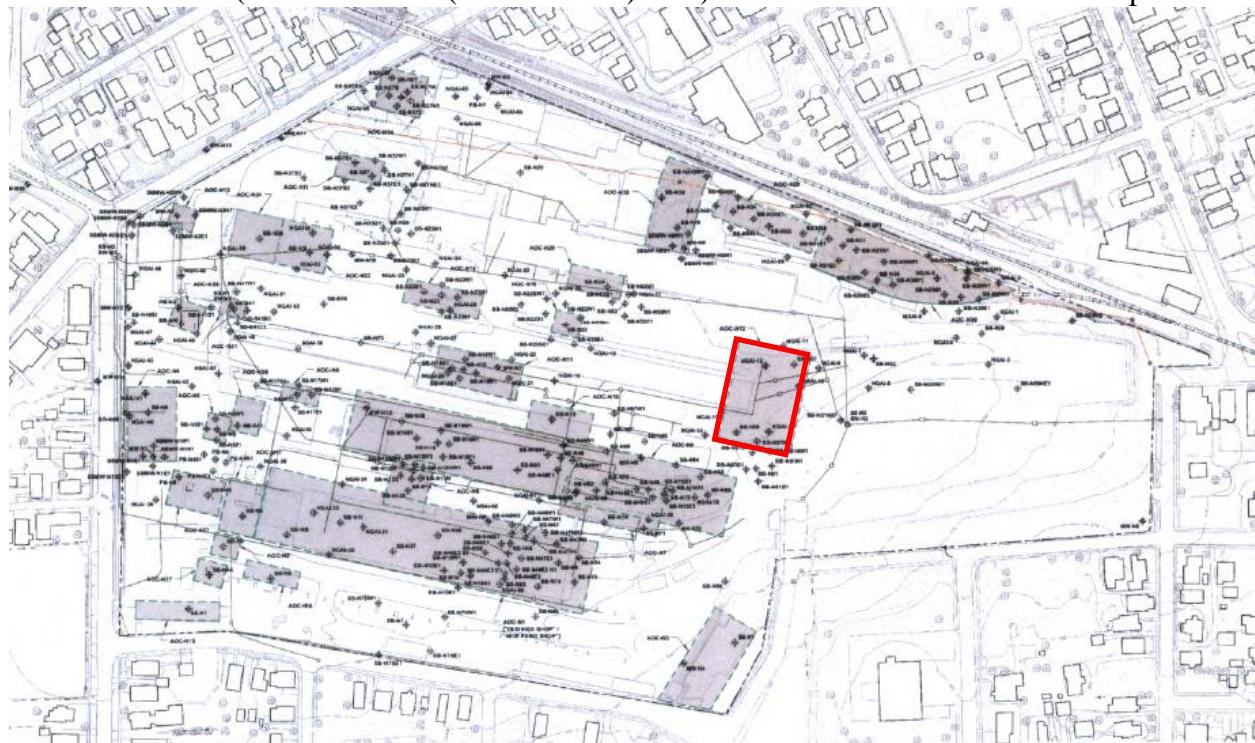
1922 Sanborn map



(Trinity pls. Ex. 3 at TRINGRNL048769 (emphasis added, i.e., the red rectangle).)

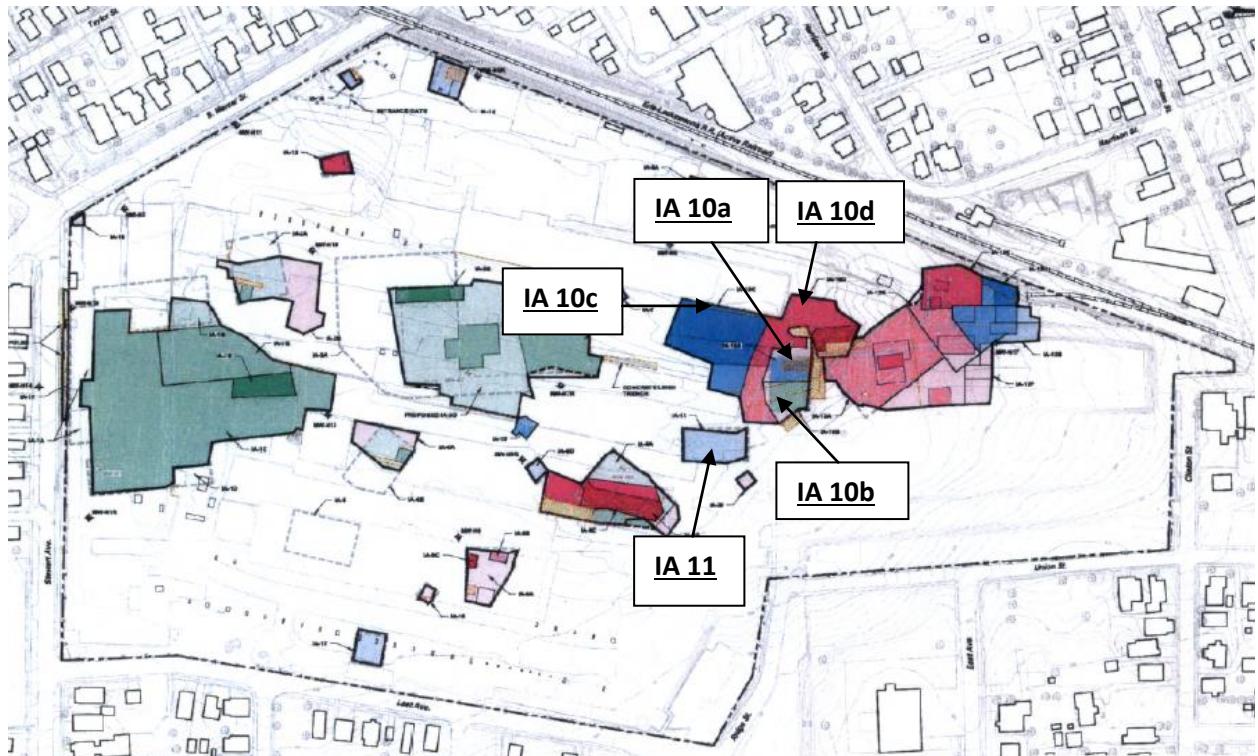
FOF 361. It is more likely than not that: (a) Greenlease constructed the former paint shop; (b) Shelby Steel did not construct a building in the location of the former paint shop prior to Greenlease's ownership of the North Plant; (c) historic fill was required to be placed at the North Plant prior to erecting buildings on that site; and (d) Greenlease admits that it is responsible for placing historic fill in the portion of the stream on which part of AOC-N11 is situated. Under those circumstances, it is more likely than not that Greenlease caused the lead contamination requiring remediation in IAs 3a-3c by placing historic fill in that location to build the former paint shop.

FOF 362. AOC-N12 is the cleaning/oil and paint storage areas and the former locomotive cleaning area. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 7.) AOC-N12 is outlined on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle.))

FOF 363. There were five IAs in AOC-N12, i.e., IAs 10a-10d and 11. (Trinity pls. Ex. 83.) The primary contaminant requiring remediation in IAs 10a-10d and 11 was lead. (Trinity pls. Ex. 14 at TRINGRNL068080-81.) IAs 10a-10d and 11 are identified on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the five text boxes and five black arrows).)

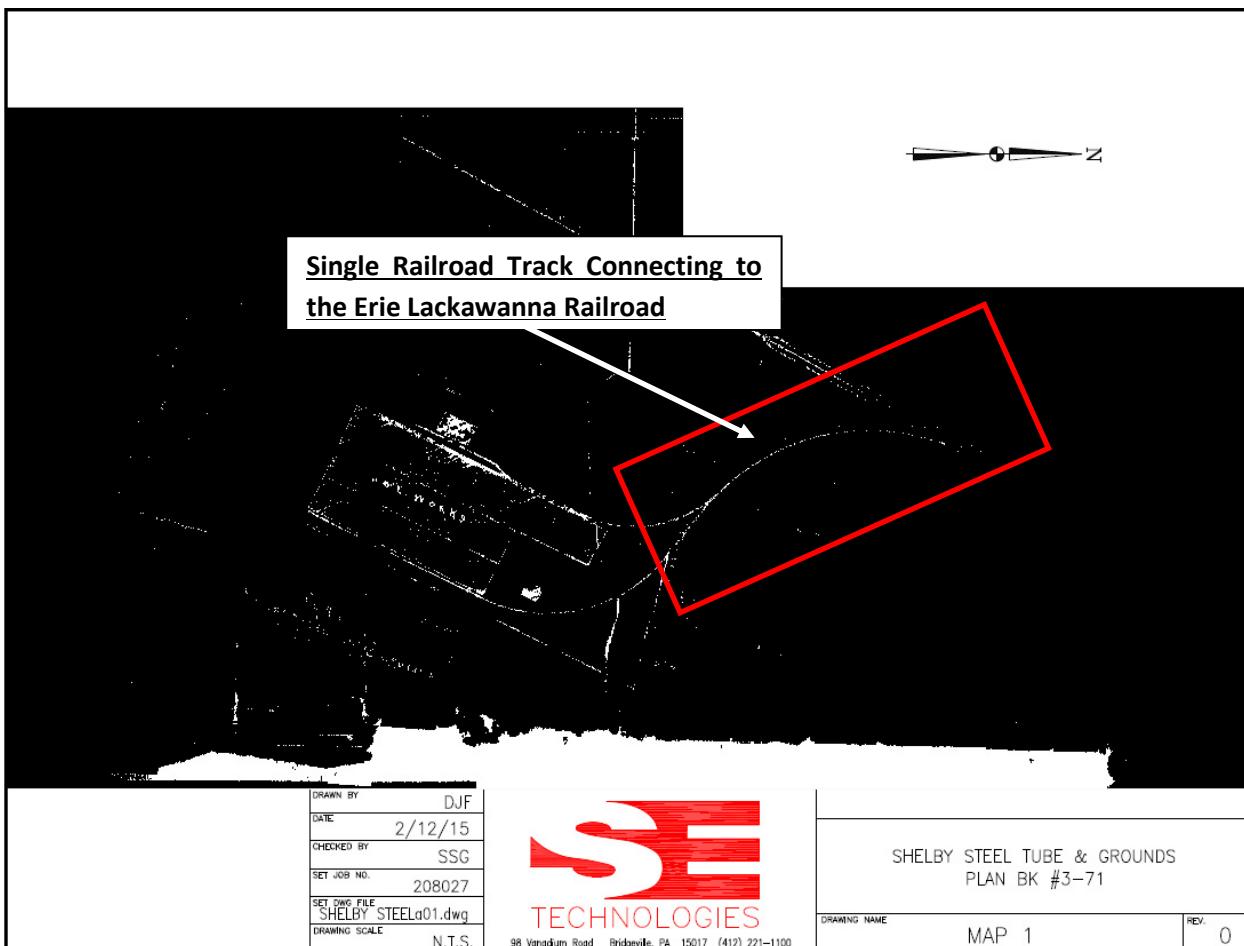
FOF 364. At least four soil borings were taken from AOC-N12. (Trinity pls. Ex. 16 at 070576.) The soil boring logs show that historic fill was retrieved in each of those soil borings. (Trinity pls. Ex. 11 at TRINGRNL058721-22 and TRINGRNL058833-34.)

FOF 365. Gormley attributes the lead contamination that required remediation in AOC-N12 to Greenlease placing historic fill in that area. (Gormley's Updated Expert Report dated December 2014, Table 4-1.)

FOF 366. Gerritsen attributes the lead contamination that required remediation in AOC-N12 to third parties that owned that area of the North Plant prior to Greenlease. (T.T. 4/24/15 (ECF No. 343) at 90-91; Greenlease Ex. MMMM.)

FOF 367. Gormley notes that from 1911 through 1922, there was a single railroad track and multiple residences beyond the North Plant property in AOC-N12. (Gormley's Updated Expert Report dated December 2014, Table 4-1 at TRINGRNL058294.)

FOF 368. A single railroad track is shown on the following map depicting Shelby Steel's structures at the North Plant.

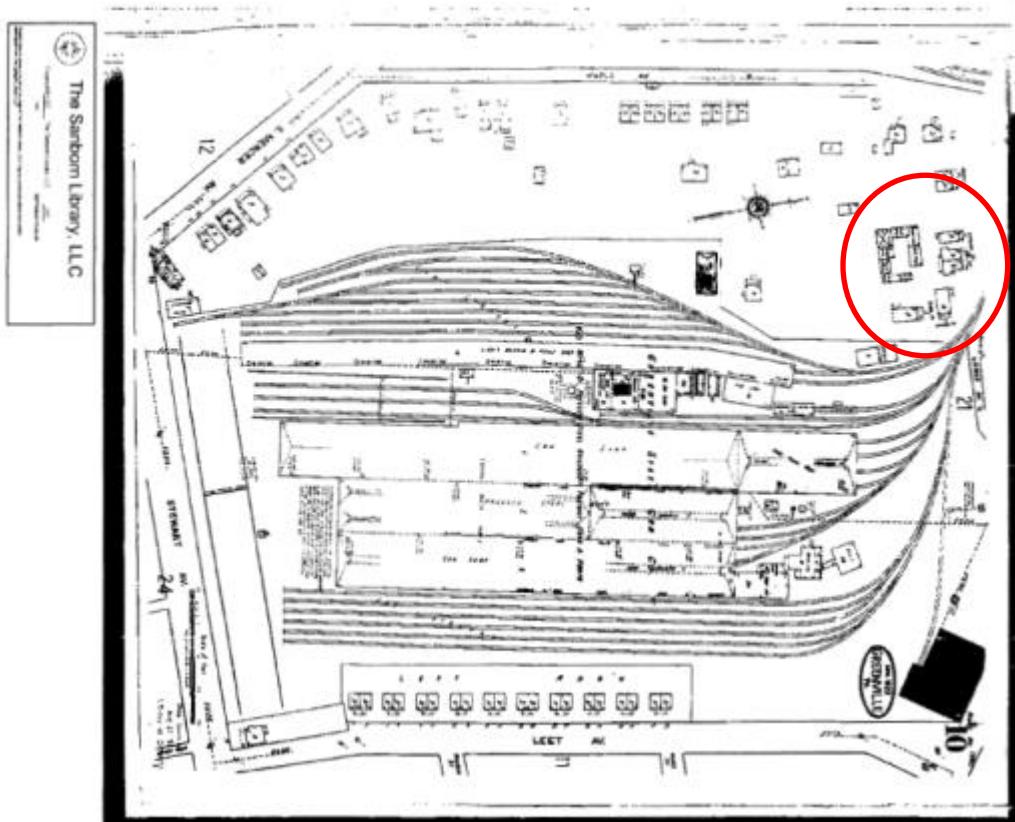


(Greenlease Ex. NNNN (emphasis added, i.e., the text box, red rectangle, and white arrow).)

FOF 369. Historic fill was required to be placed to construct the railroad track depicted in Greenlease exhibit NNNN. (T.T. 4/24/15 (ECF No. 343) at 73.) Gerritsen explained that the Erie Lackawanna Railroad to which the railroad line connected was an “elevated rail line” and that the North Plant was situated in a hollow, meaning it was at a lower elevation than the rail line. (Id. at 73-74.) Under those circumstances, “to connect to the rail line in that area...there had to be fill brought in to make the primary connection and then supporting fill...to both establish the proper grade and to enter the property.” (Id. at 74.) Gerritsen also explained that the rail line would have traveled over a portion of the stream, and, therefore, the stream was culverted and historic fill was placed atop to support the rail line. (Id.) Greenlease did not own the portion of the stream over which the single rail line was constructed at the time that portion of the stream was placed in a culvert and covered with historic fill. (Id. at 87.)

FOF 370. Gerritsen explained that the rail lines must be “built up” and stabilized because “a lot of weight is going to be coming on” to that area. (T.T. 4/24/15 (ECF No. 343) at 81.)

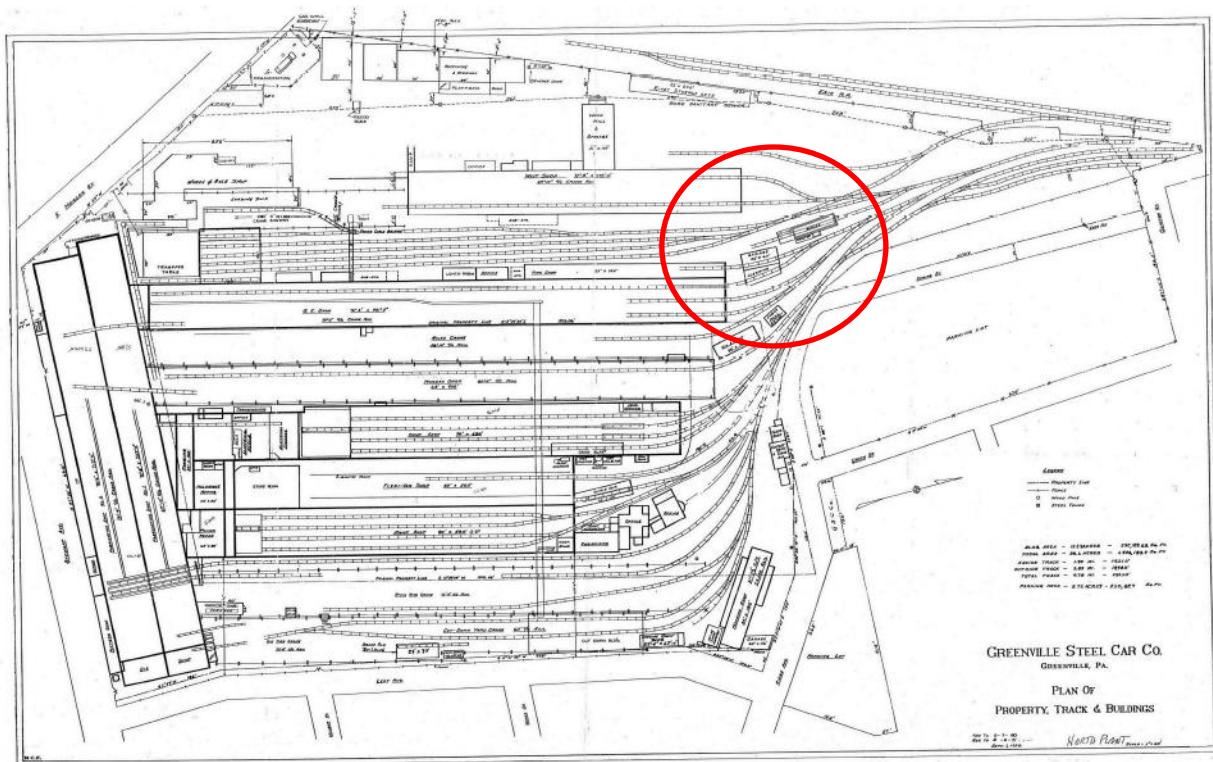
FOF 371. The 1922 Sanborn map depicts residences beyond the property boundary of the North Plant in the area of AOC-N12, which are circled in red on the map below.



(Trinity pls. Ex. 3 at TRINGRNL048769 (emphasis added, i.e., the red oval).)

FOF 372. Gerritsen testified that historic fill was placed in the area of AOC-N12 and the surrounding areas prior to Greenlease owning that portion on the North Plant. (T.T. 4/24/15 (ECF No. 343) at 90-91.)

FOF 373. A historic site plan of Greenlease's operations at the North Plant dated February 7, 1980, depicts at least ten railroad tracks and two structures in the area of AOC-N12.



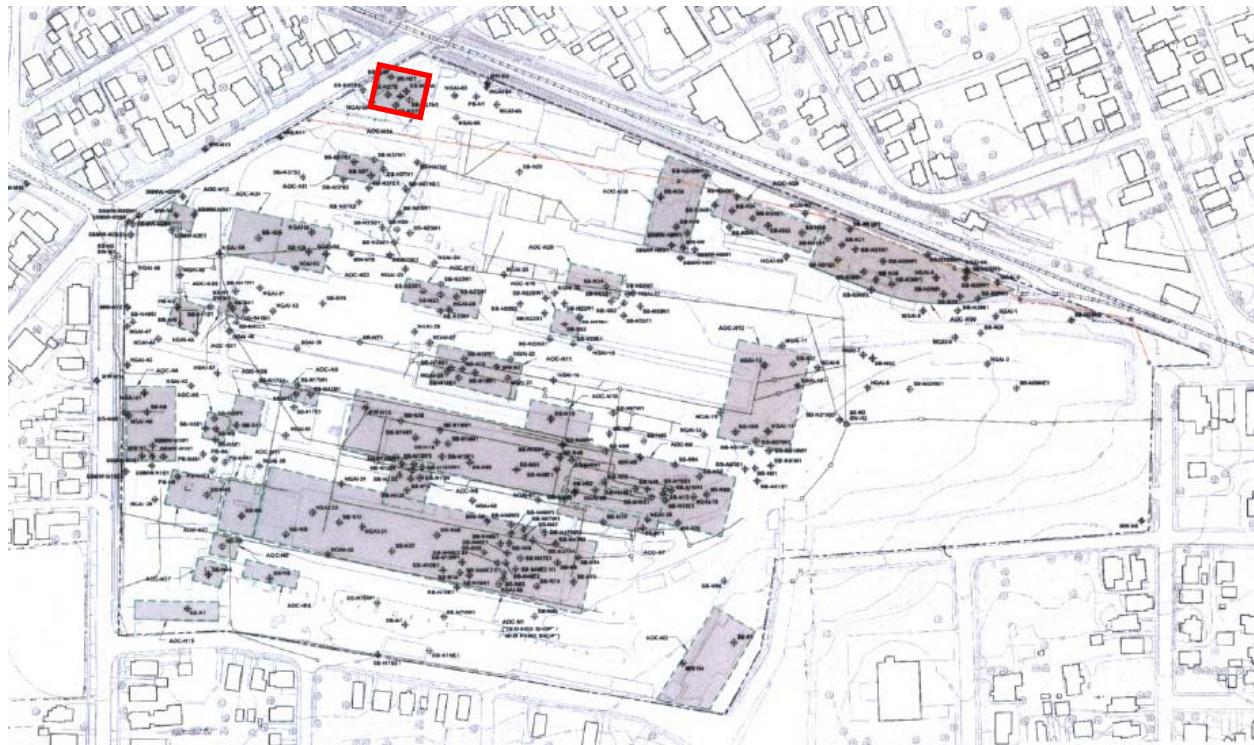
(Trinity pls. Ex. 11 at TRINGRNL058661 (emphasis added, i.e., the red circle).)

FOF 374. Based upon the foregoing, it is more likely than not that a third party other than Greenlease placed historic fill in IAs 10a-10d and 11 to build the residences depicted in the 1922 Sanborn map, construct a single rail line to connect the elevated Erie Lackawanna Railroad to the North Plant, which was situated at a lower elevation than the rail line, and run the rail line over the stream, i.e., a third party other than Greenlease placed a northern portion of the stream into a culvert and covered it with historic fill to support the one rail line coming onto the North Plant. It is also more likely than not that Greenlease constructed two structures and installed approximately eleven additional railroad tracks in the vicinity of IAs 10a-10d and 11, which required Greenlease to place additional historic fill in those areas. In other words, it is more likely than not that both Greenlease and a third party *other* than Greenlease caused the lead contamination that required remediation in IAs 10a-10d and 11.

FOF 375. AOC-N13 is the former southwest transformer area and down gradient groundwater location, i.e., the area of the old gas station. The impacts in this AOC were “low level impacts of SVOCs and metals.” (T.T. 4/21/15 (ECF No. 341) at 8.) Gormley did not allocate percentages of responsibility for this area. (Id. at 7-8; T.T. 4/23/15 (ECF No. 342) at 55.) IA 16 is located in the area of AOC-N13. (Trinity pls. Ex. 83.)

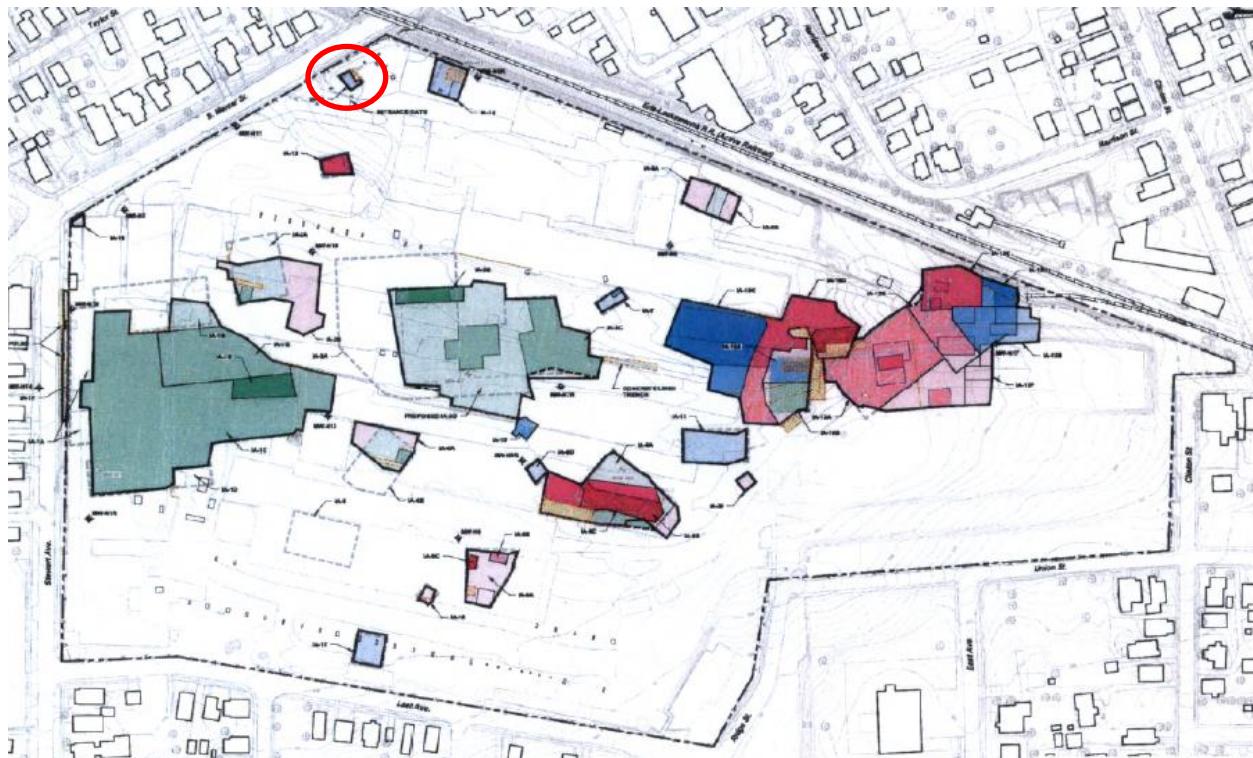
FOF 376. Gormley allocated 100% of responsibility for the contamination that required remediation in IA 16 to Greenlease. (Trinity pls. Ex. 83; T.T. 4/23/15 (ECF No. 342) at 55.) He admitted that was error. (Id.) Greenlease’s percentage of responsibility should be 0, i.e., Greenlease did not cause the contamination that required remediation in IA 16. (Id.)

FOF 377. AOC-N14 is the former substation area. Gormley allocated 52% to Greenlease and 48% to Trinity for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 8.) AOC is outlined on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

FOF 378. There is one IA in AOC-N14, i.e., IA 15. (Trinity pls. Ex. 83.) The primary contaminant that required remediation in IA 15 was lead. (Trinity pls. Ex. 14 at TRINGRNL068081.) IA 15 is circled on the map below.

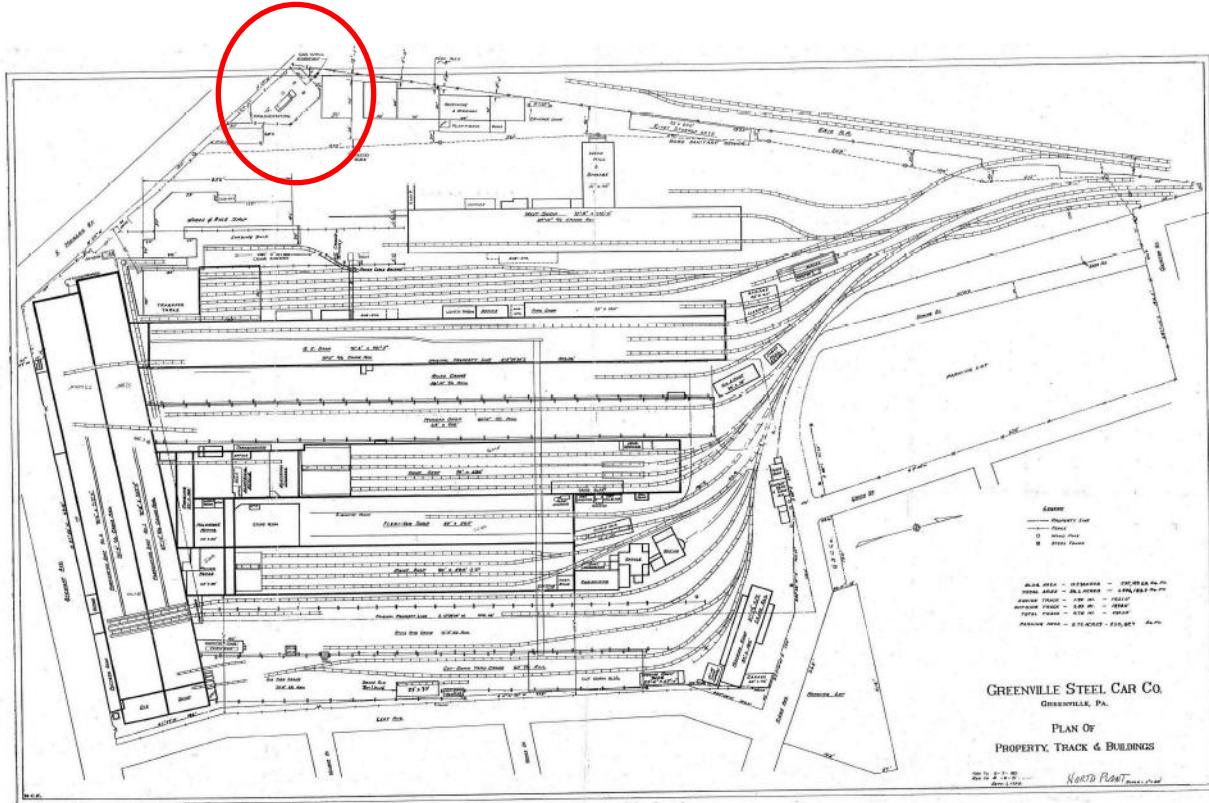


(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

FOF 379. At least four soil borings were taken from AOC-N14. (Trinity pls. Ex. 16 at TRINGRNL070576.) The soil boring logs show that historic fill was retrieved from one of the four soil borings taken from AOC-N14. (Trinity pls. Ex. 11 at TRINGRNL058745-48.)

FOF 380. A historic site plan dated February 7, 1980, depicts a structure entitled substation in the area of AOC-N14 and IA 15. Gormley opined that Greenlease operated the substation in AOC-N14 for fifteen years and Trinity Industries, Inc. operated the substation in

AOC-N14 for fourteen years (Gormley's Updated Expert Report dated December 2014, Table 4-1 at TRINGRNL058294.)



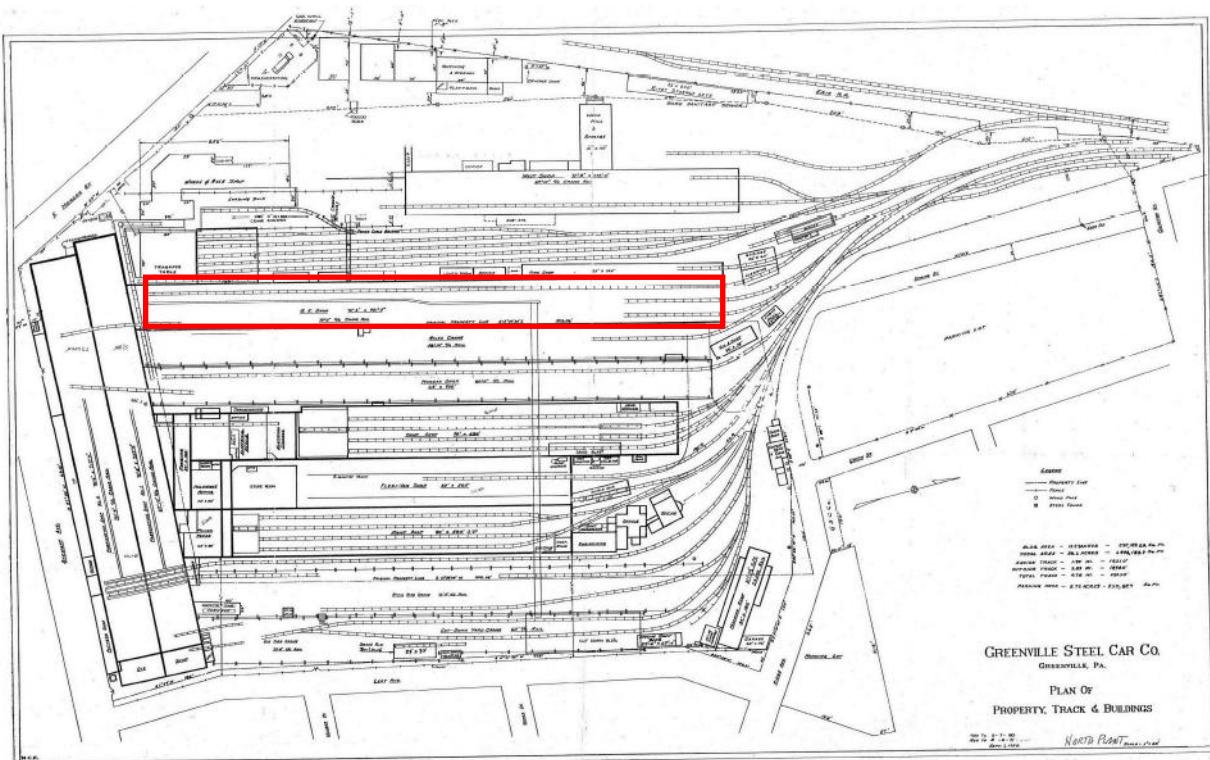
(Trinity pls. Ex. 11 at TRINGRNL058661 (emphasis added, i.e., the red oval).)

FOF 381. According to Gormley, prior to Greenlease owning that area of the North Plant, there were residences in the location of AOC-N15 and IA 14. (Gormley's Updated Expert Report dated December 2014, Table 4-1.)

FOF 382. Gerritsen testified that historic fill would have been required to construct the residences on the western side of the North Plant, e.g., in AOC-N14 and IA 15. (4/24/15 (ECF No. 343) at 78-79.)

FOF 383. Based upon the foregoing, it is more likely than not that third parties other than Greenlease placed historic fill in IA 15, which caused lead contamination that required remediation.

FOF 384. AOC-N18 is the former substation/transformer area and the former GE shop. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 8.) The GE shop is outlined on the foregoing historic site plan of Greenlease's operations, which is dated February 7, 1980.



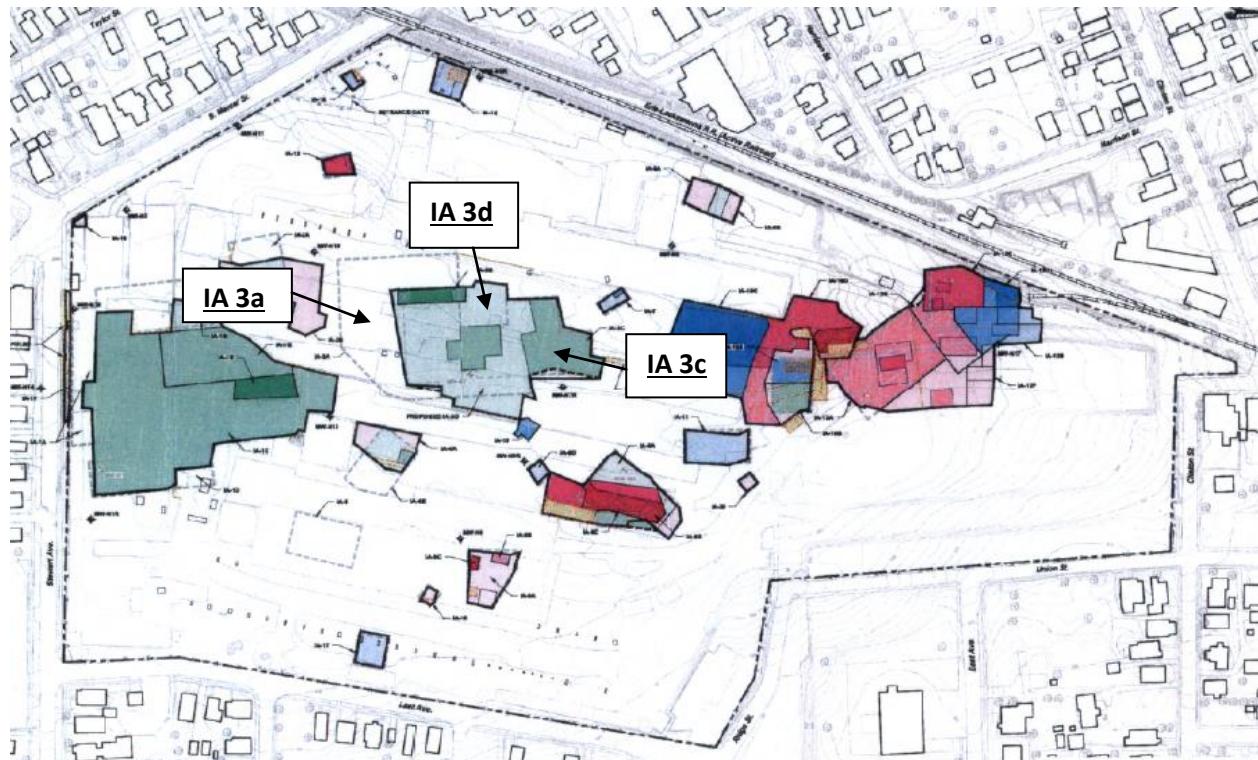
(Trinity pls. Ex. 11 at TRINGRNL058661 (emphasis added, i.e., the red rectangle).)

FOF 385. AOC-N18 is outlined on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

FOF 386. There were three IAs in AOC-N18, i.e., IAs 3a, 3c, and 3d. (Trinity pls. Ex. 83.) The primary contaminant requiring remediation in IAs 3a, 3c, and 3d was lead. (Trinity pls. Ex. 14 at TRINGRNL068078-79.) IAs 3a, 3c, and 3d are identified on the map below.



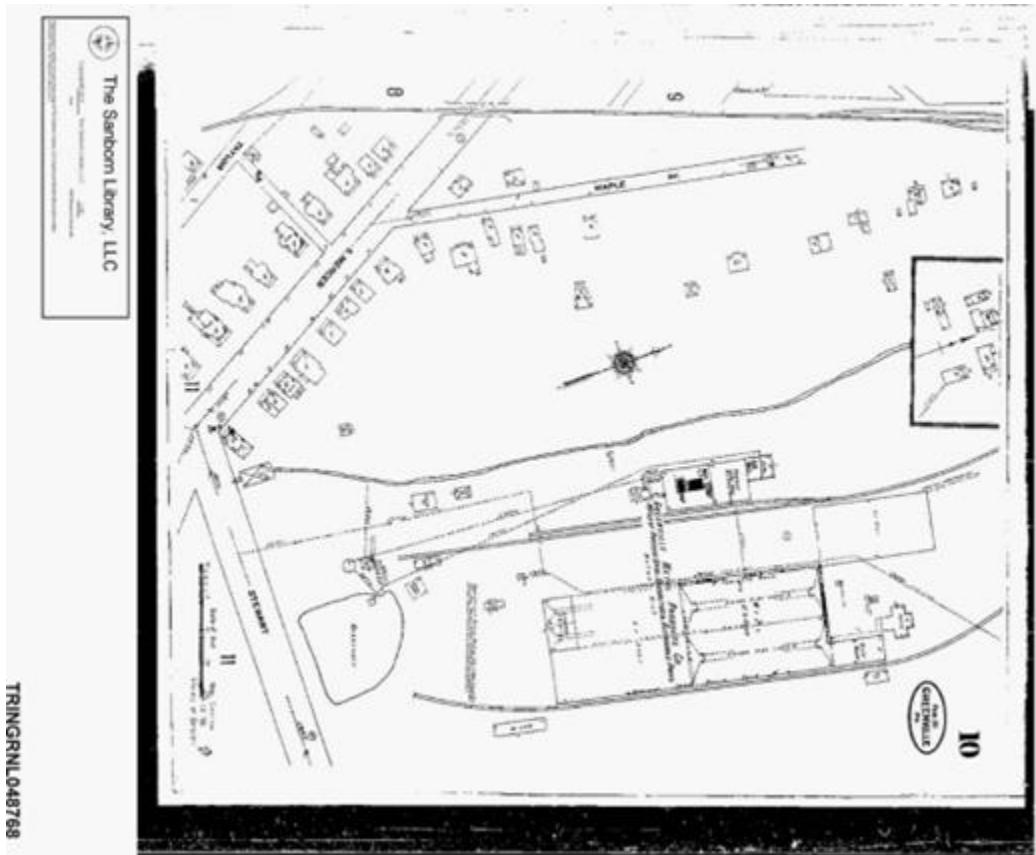
(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the three text boxes and three black arrows).)

FOF 387. At least five soil borings were taken from AOC-N18. (Trinity pls. Ex. 16 at TRINGRNL070576.) The soil boring logs for those soil borings show that historic fill was found in each of those soil borings. (Trinity pls. Ex. 11 at TRINGRNL058732-36.)

FOF 388. Gormley attributes the lead contamination in AOC-N18 and IAs 3a, 3c, and 3d to historic fill placed by Greenlease. (Gormley's Updated Expert Report dated December 2014, Table 4-1 at TRINGRNL058294.)

FOF 389. Gerritsen opines that Greenlease is responsible for: 78% of the lead contamination that required remediation in IA 3a; between 63% and 78% of the lead contamination that required remediation in IA 3c; and 0% of the lead contamination that required remediation in IA 3d. (Greenlease Exs. Revised TTTT and VVVV.)

FOF 390. When Greenlease began to operate the North Plant after Shelby Steel's ownership of the property, the former GE shop did not exist at the North Plant; indeed, the former GE shop is not depicted on the 1911 Sanborn map.



(Trinity pls. Ex. 3 at TRINGRNL048768.)

FOF 391. Historic fill was required to be placed prior to constructing buildings in the hollow of the North Plant. . (T.T. 4/24/15 (ECF No. 343) at 76, 82.)

FOF 392. Based upon the foregoing, it is more likely than not that Greenlease caused the lead contamination that required remediation in IAs 3a, 3c, and 3d by placing historic fill in those areas to construct the former GE shop.

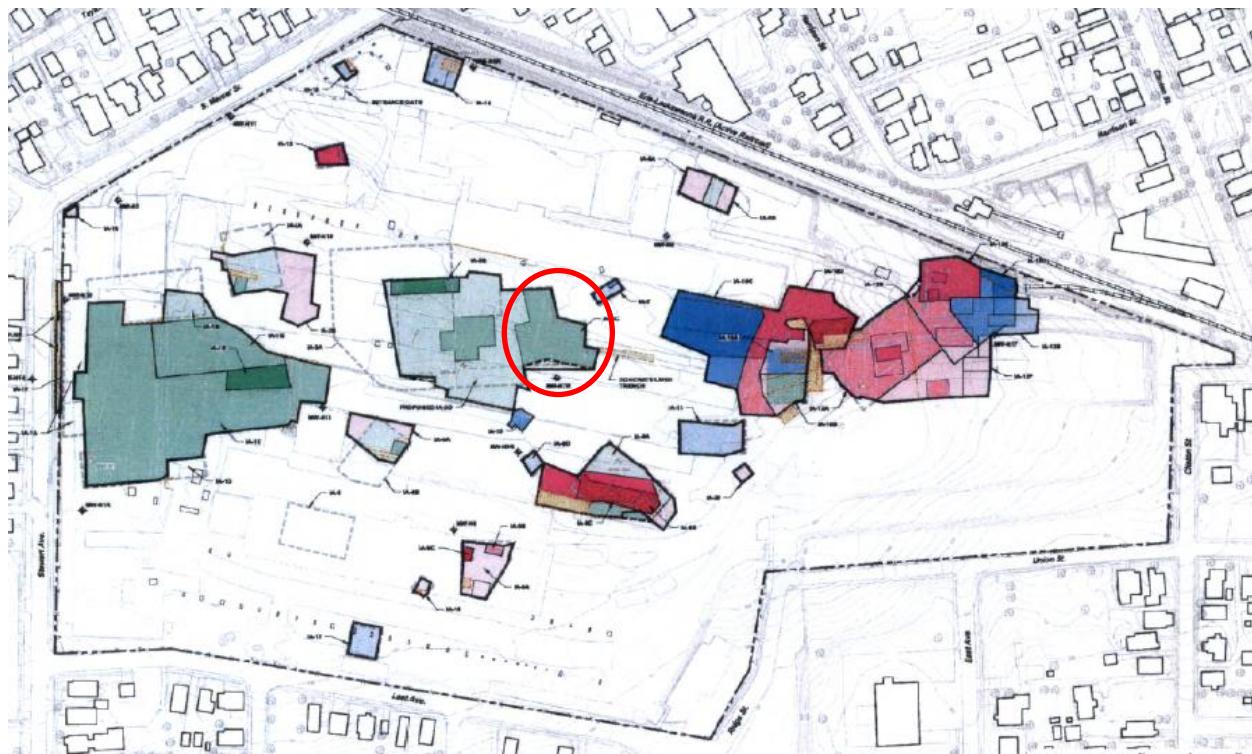
FOF 393. AOC-N19 is a substation/transformer area and the north end of the former GE shop. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of

concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 8-9.) AOC-N19 is outlined on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red square).)

FOF 394. There is one subpart of one IA in AOC-N19, i.e., IA 3c. (Trinity pls. Ex. 83.) The primary contaminant requiring remediation in IA 3c was lead. (Trinity pls. Ex. 14 at TRINGRNL068079.) IA 3c is circled on the map below.

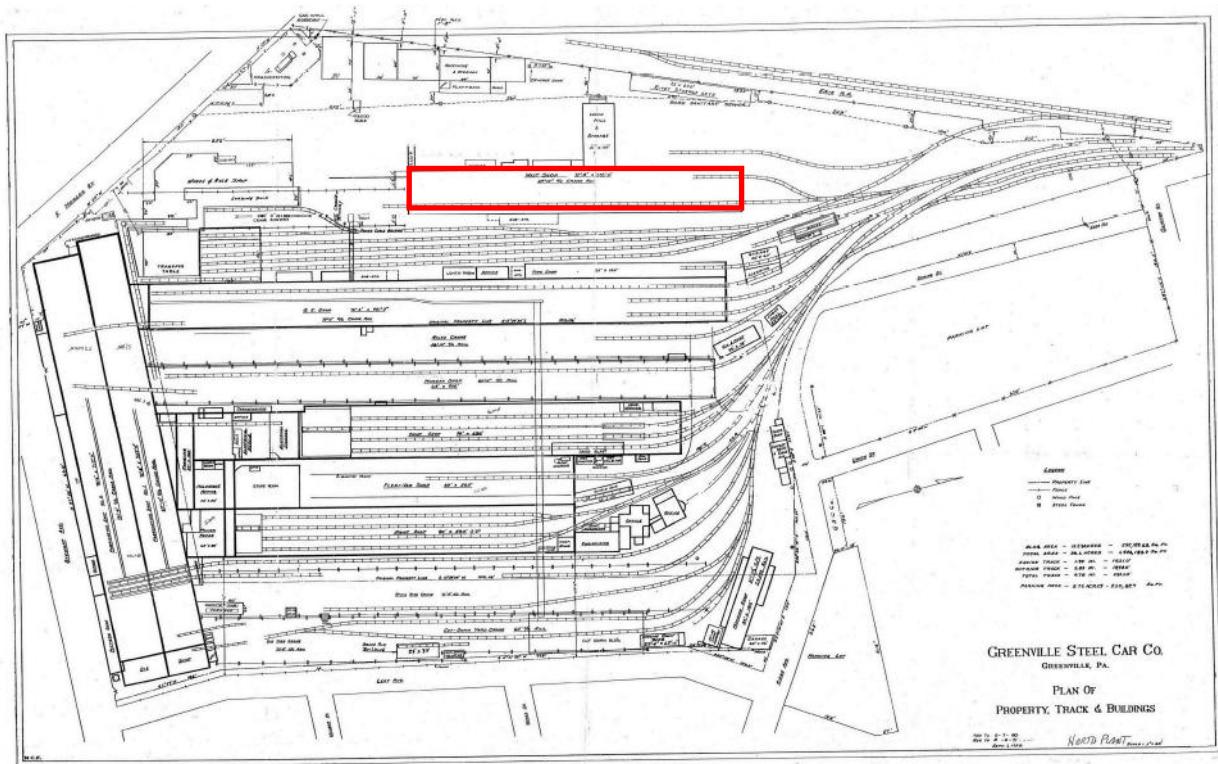


(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

FOF 395. At least two soil borings were taken from AOC-N19. (Trinity pls. Ex. 16 at TRINGRNL070576.) The soil borings logs from each of those soil borings show that historic fill was found in those soil borings. (Trinity pls. Ex. 11 at TRINGRNL058724 and 26.)

FOF 396. For the same reasons set forth above with respect to IAs 3a, 3c, and 3d, the it is more likely than not that Greenlease caused the lead contamination that required remediation in IAs 3a, 3c, and 3d by placing historic fill in those areas to build the former GE shop.

FOF 397. AOC-N20 is a substation/transformer area in the former west shop. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 9.) The west shop is outlined on the historic site plan dated February 7, 1980, below.

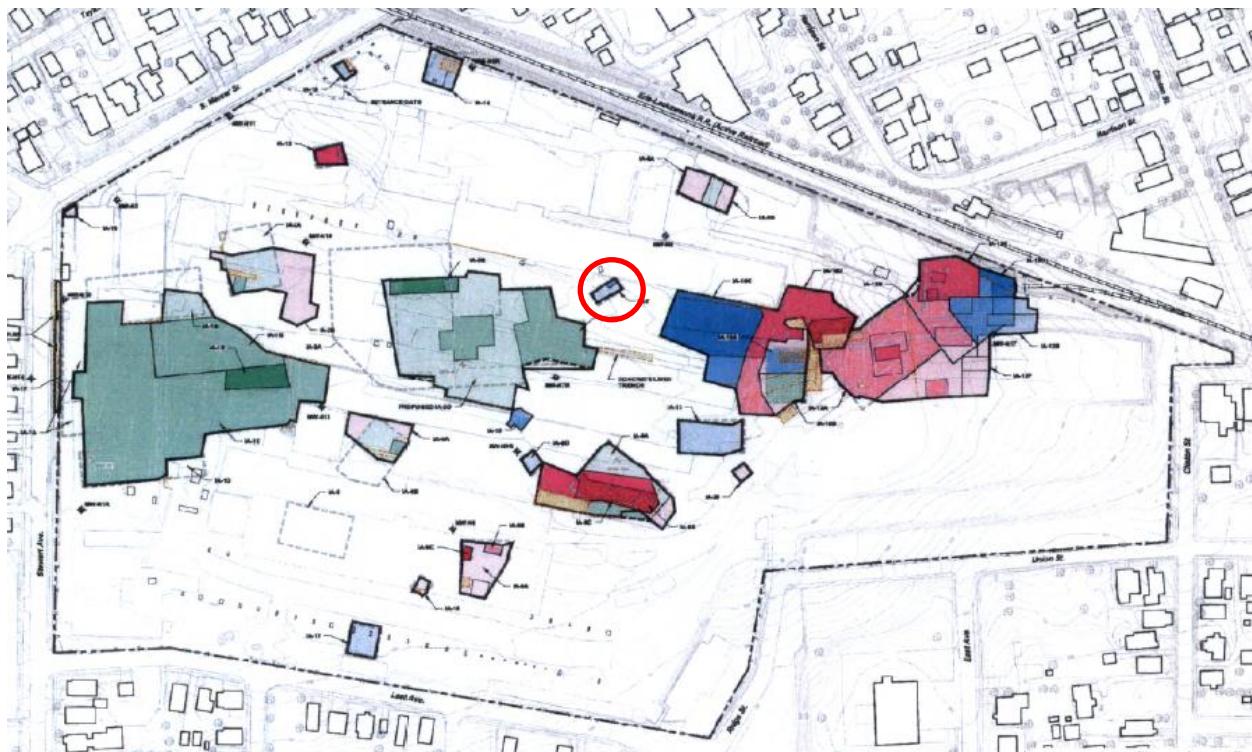


(Trinity pls. Ex. 11 at TRINGRNL058661 (emphasis added, i.e., the red rectangle).)



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

FOF 399. There was one IA in AOC-N20, i.e., IA 7. (Greenlease Ex. Revised TTTT.) The primary contaminant requiring remediation in IA 7 was lead. (Trinity pls. Ex. 14 at TRINGRNL068080.) IA 7 is circled on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

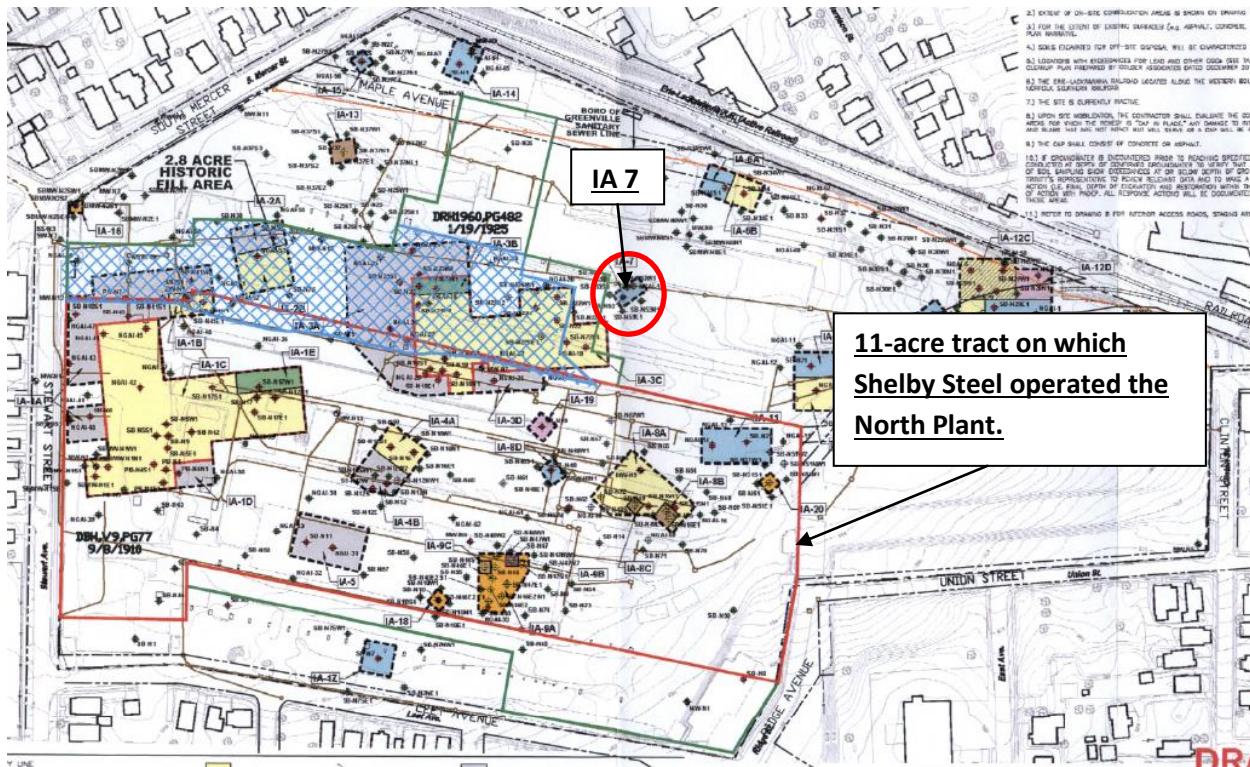
FOF 400. At least one soil boring was taken from AOC-N20. (Trinity pls. Ex. 16 at TRINGRNL070576.) The soil boring log from that soil boring shows that historic fill was retrieved in that soil boring. (Trinity pls. Ex. 11 at TRINGRNL058737.)

FOF 401. Gormley attributes the lead contamination that required remediation in AOC-N20 to Greenlease placing historic fill in that location. (Gormley's Updated Expert Report dated December 2014, Table 4-1 at TRINGRNL058295.)

FOF 402. Gerritsen opined that the lead contamination that required remediation in AOC-N20 and IA 7 was caused by historic fill placed by a third party other than Greenlease. (T.T. 4/24/15 (ECF No. 343) at 90-91; Greenlease Ex. MMMM.)

FOF 403. The area of the North Plant on which the west shop was erected, i.e., AOC-N20 and IA 7, was not part of the original 11-acre tract of land which Shelby Steel owned.

(Greenlease Ex. UUU.) The red outline on the forgoing overlay map created by Gerritsen represents the 11-acre tract of property on which Shelby Steel operated the North Plant. (Greenlease Ex. TTT.) IA 7 is circled on the overlay map below and is outside the 11-acre tract on which Shelby Steel operated the North Plant.



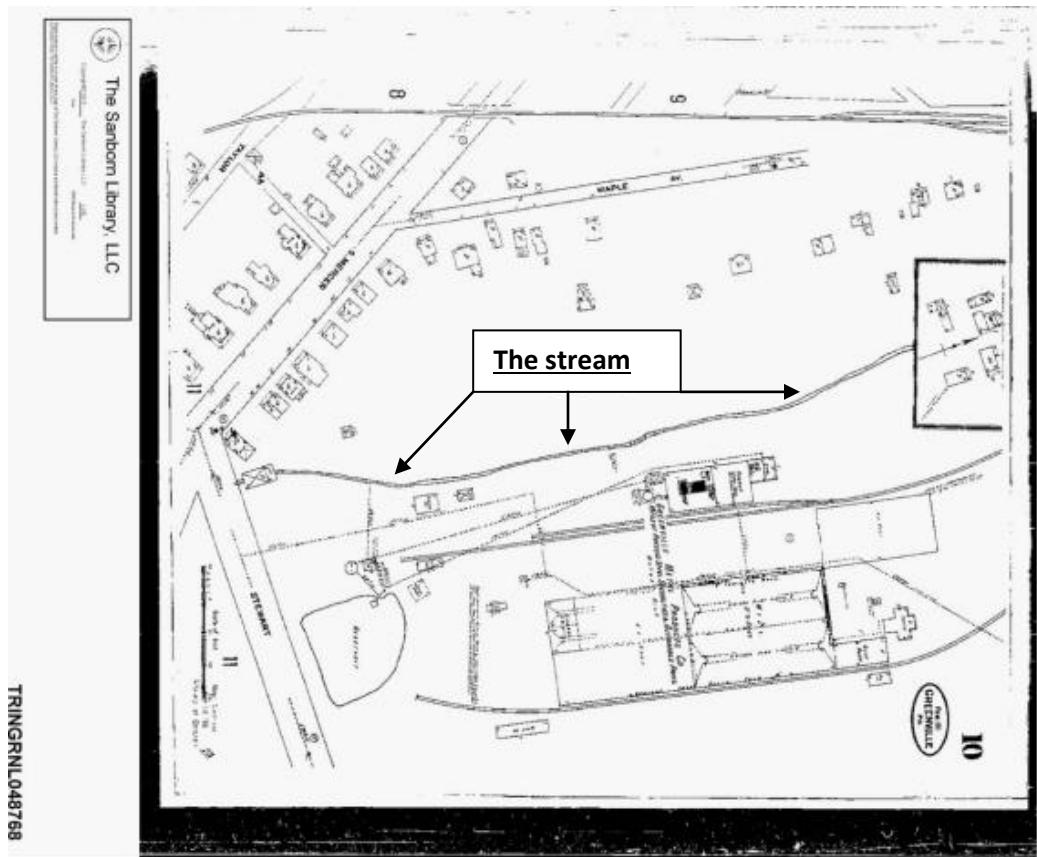
(Greenlease Ex. UUU (emphasis added, i.e., the two text boxes, one red oval, and two black arrows).)

FOF 404. Historic fill was required to be placed prior to constructing buildings in the hollow of the North Plant. (T.T. 4/24/15 (ECF No. 343) at 76, 82.)

FOF 405. Based upon the foregoing, it is more likely than not that Greenlease is responsible for the lead contamination that required remediation in IA 7 by placing historic fill in that location to construct the west shop.

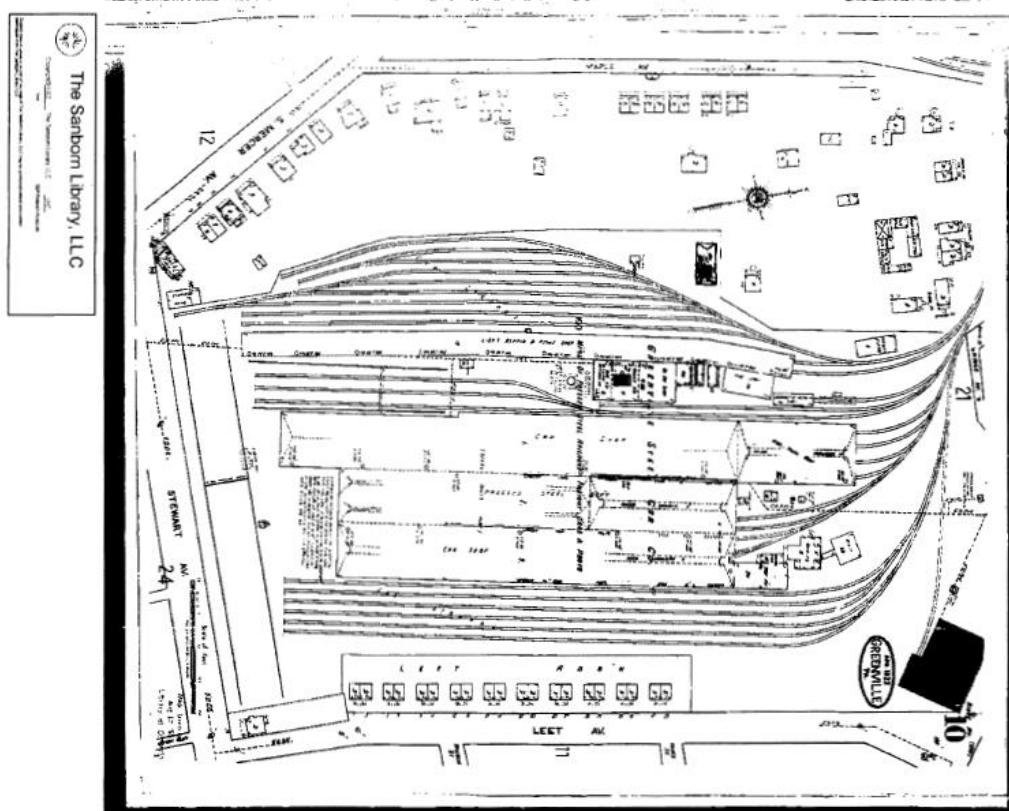
FOF 406. AOC-N21 is a storm water discharge/former stream location. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 9.)

FOF 407. The most recent Sanborn map to depict the stream was the 1911 Sanborn map. The stream is identified on the 1911 Sanborn map below.



(Trinity pls. Ex. 3 at TRINGRNL048768 (emphasis added, i.e., the text box and three black arrows).)

FOF 408. The stream is not depicted on the 1922 Sanborn map.



(Trinity pls. Ex. 3 at TRINGRNL048769.)

FOF 409. Between 1911 and 1922, the stream was culverted and historic fill was placed on top of the culvert. (T.T. 4/24/15 (ECF No. 343) at 133; (Trinity pls. Ex. 3 at TRINGRNL048768 and 69.)

FOF 410. AOC-N21, which Gormley identified as the former stream location, is outlined on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

FOF 411. There is one IA in AOC-N21, i.e., IA 1b. (Trinity pls. Ex. 83.) The primary contaminant that required remediation in IA 1b was lead. (Trinity pls. Ex. 14 at 068077.) IA 1b is circled on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

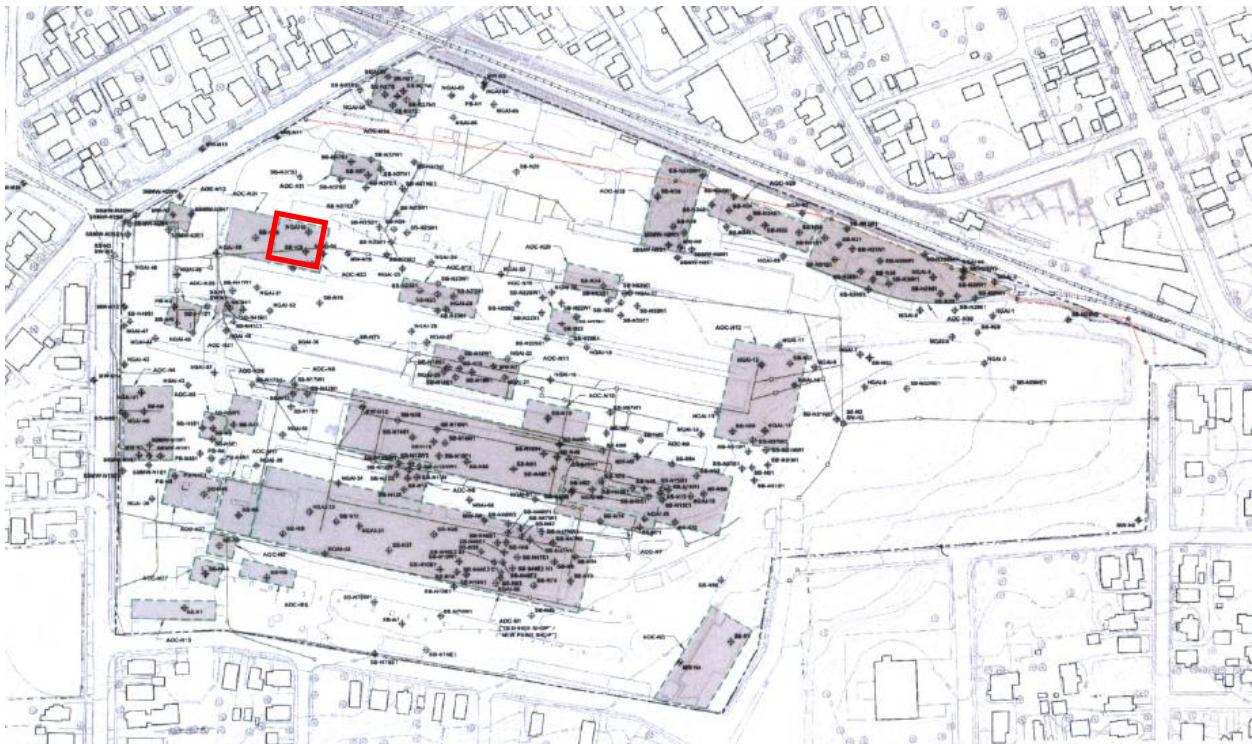
FOF 412. At least one soil boring was taken from AOC-N21. (Trinity pls. Ex. 16 at TRINGRNL070576.) The soil boring log for that soil boring shows that historic fill was retrieved in that soil boring. (Trinity pls. Ex. 11 at TRINGRNL058795.)

FOF 413. Gormley opined that the likely cause of the lead contamination that required remediation in IA 1b was historic fill placed by Greenlease or Greenlease's use of lead paint during truck assembly and in the Niles yard. (Gormley Expert Report, Table 4-1 at TRINGRNL058295.)

FOF 414. Gerritsen allocated 100% responsibility to Greenlease for IA 3b because IA 3b is part of the 2.8-acre tract of land of the North Plant on which Gerritsen opined Greenlease placed historic fill. (Greenlease Ex. UUU.)

FOF 415. Based upon the foregoing, including the evidence that IA 3b is entirely within the 2.8 acres of the North Plant on which Greenlease concedes it placed historic fill at the North Plant, it is more likely than not that the lead contamination that required remediation in IA 3b was caused by Greenlease placing historic fill in that area.

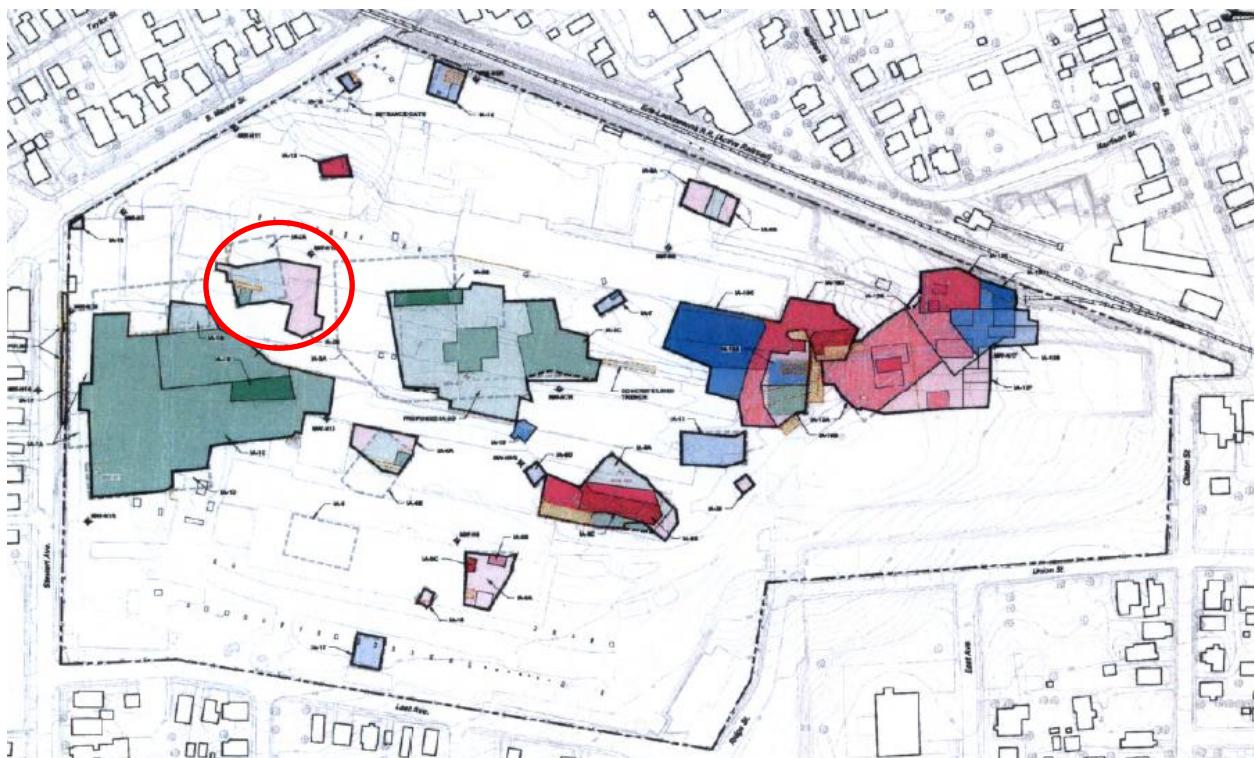
FOF 416. AOC-N22 is a storage area for oil-containing PCBs, which is north of the transfer table pit. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. The constituents of concern in the surface soil were metals. There are no constituents of concern in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 9.) AOC-N22 is outlined in the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red square).)

FOF 417. There are two IAs in AOC-N22, i.e., IAs 2a and 2b. (Trinity pls. Ex. 83.)

The primary contaminant that required remediation in IAs 2a and 2b was lead. (Trinity pls. Ex. 14 at 068078.) IAs 2a and 2b are circled on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

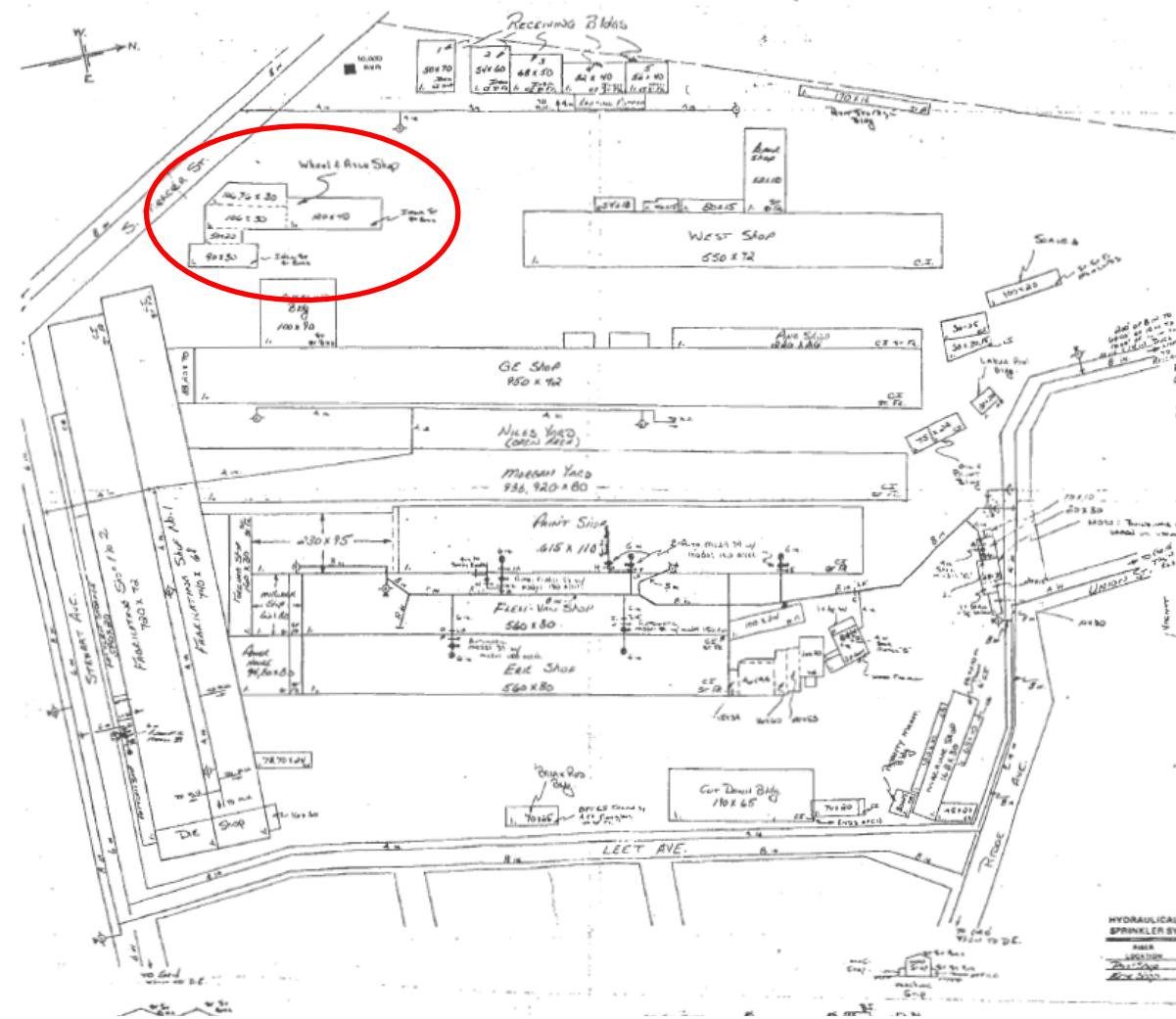
FOF 418. At least one soil boring was taken from AOC-N21. (Trinity pls. Ex. 16 at TRINGRNL070576.) The soil boring log for that soil boring shows that historic fill was retrieved in that soil boring. (Trinity pls. Ex. 11 at TRINGRNL058792.)

FOF 419. According to Gerritsen, Greenlease is responsible for 100% of the lead contamination that required remediation in IAs 2a and 2b because Greenlease placed historic fill in that area, i.e., IAs 2a and 2b are part of the 2.8 acres on which Gerritsen opines Greenlease placed historic fill. (Greenlease Exs. Revised TTTT-WWWW.)

FOF 420. Based upon the foregoing, it is more likely than not that Greenlease caused the lead contamination that required remediation in IAs 2 and 2b by placing historic fill in those areas to build upon the stream.

FOF 421. AOC-N23 is “the former substation on the west side of the former wheel and axle shop with concrete staining in the area and the chemical and storage area.” (T.T. 4/21/2015 (ECF No. 341) at 9.) Gormley allocated 52% to Greenlease and 48% to Trinity for all constituents of concern. There is no surface oil contamination in this AOC. The constituents of concern in that area were VOCs in the subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 9-10.)

FOF 422. The wheel and axle shop is depicted on the below drawing of the North Plant dated June 5, 1981. The wheel and axle shop is circled for reference.



(Trinity pls. Ex. 38 (emphasis added, i.e., the red oval).)

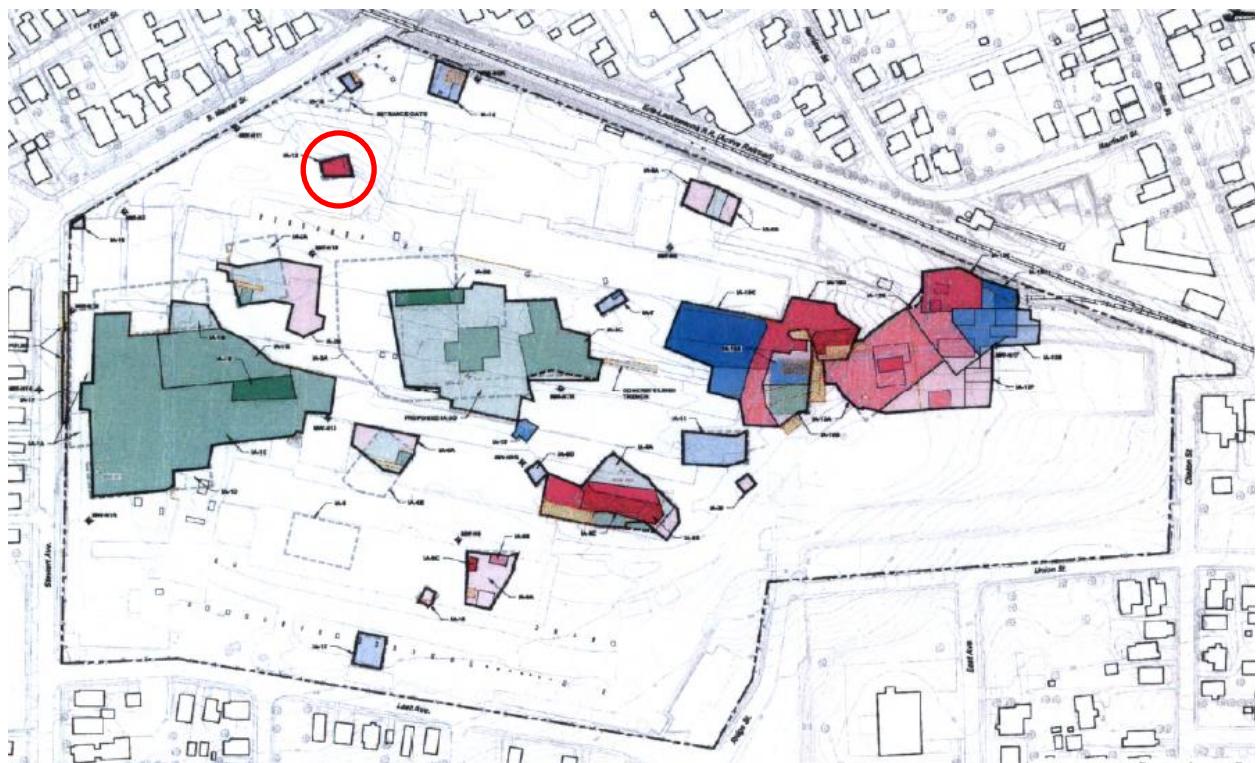
FOF 423. AOC-N23 is outlined on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

FOF 424. There is one IA in AOC-23, i.e., IA 13. (Greenlease Ex. Revised TTTT.)

The primary contaminant requiring remediation in IA 13 was VOCs. (Trinity pls. Ex. 14 at TRINGRNL.) IA 13 is circled on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

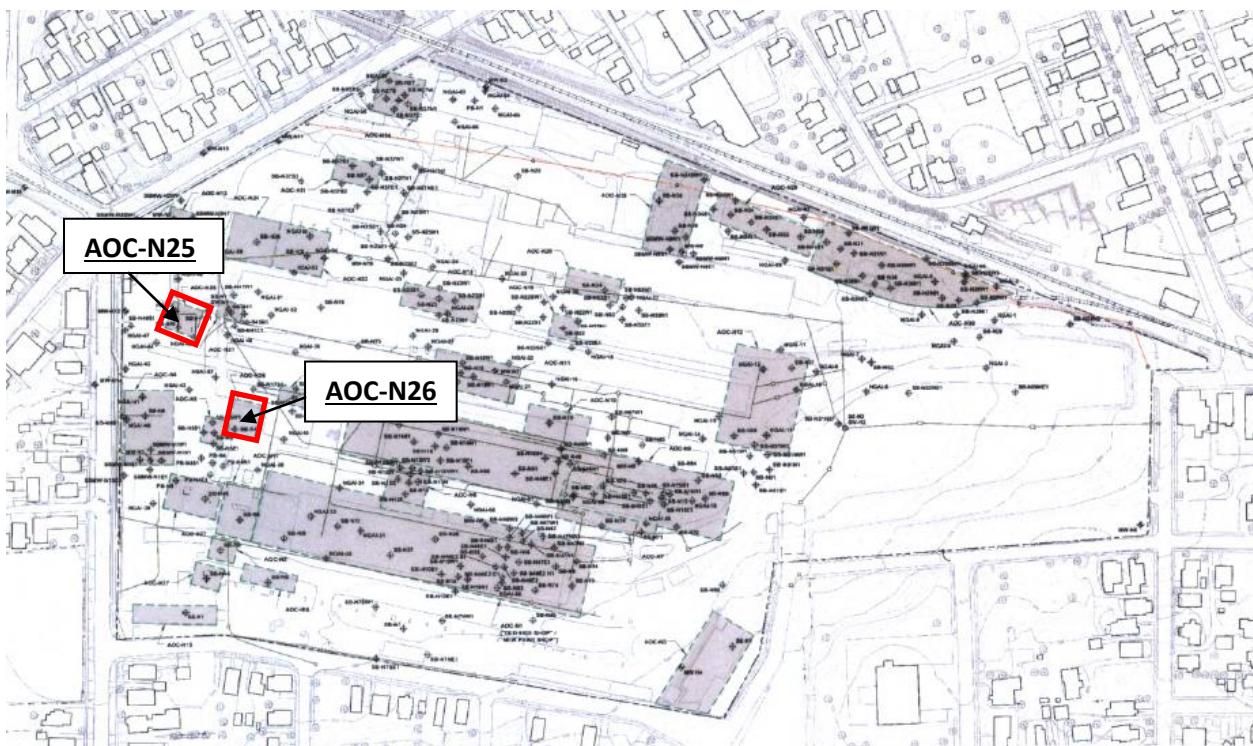
FOF 425. According to Gormley, the VOC contamination that required remediation in AOC-N23 likely was caused by oil spills during lubrication and use of a degreasing agent in the wheel and axle shop. (Gormley's Updated Expert Report dated December 2-14, Table 4-1 at TRINGRNL058295.) Gormley's allocation of 52% responsibility to Greenlease and 48% responsibility to the Trinity plaintiffs is based upon Greenlease operating the wheel and axle shop for fifteen years and Trinity Industries, Inc. operating the wheel and axle shop for 14 years. (Id.)

FOF 426. Based upon the foregoing, it is more likely than not that the 52% of the VOC contamination in IA 13 was caused by Greenlease's fifteen-year operation of the wheel and axle shop, and the other 48% of the lead contamination that required remediation was caused by Trinity Industries, Inc.'s fourteen-year operation of the wheel and axle shop.

FOF 427. AOC-N25 and AOC-N26 will be together addressed.

FOF 428. AOC-N25 is a former equipment pad with concrete staining and oily water in the surrounding trench. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 10.)

FOF 429. AOC-N26 is a stained debris and gravel area south of the former electrical repair shop. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 10.) AOC-N25 and AOC N26 are outlined on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the two text boxes, two red squares, and two black arrows).)

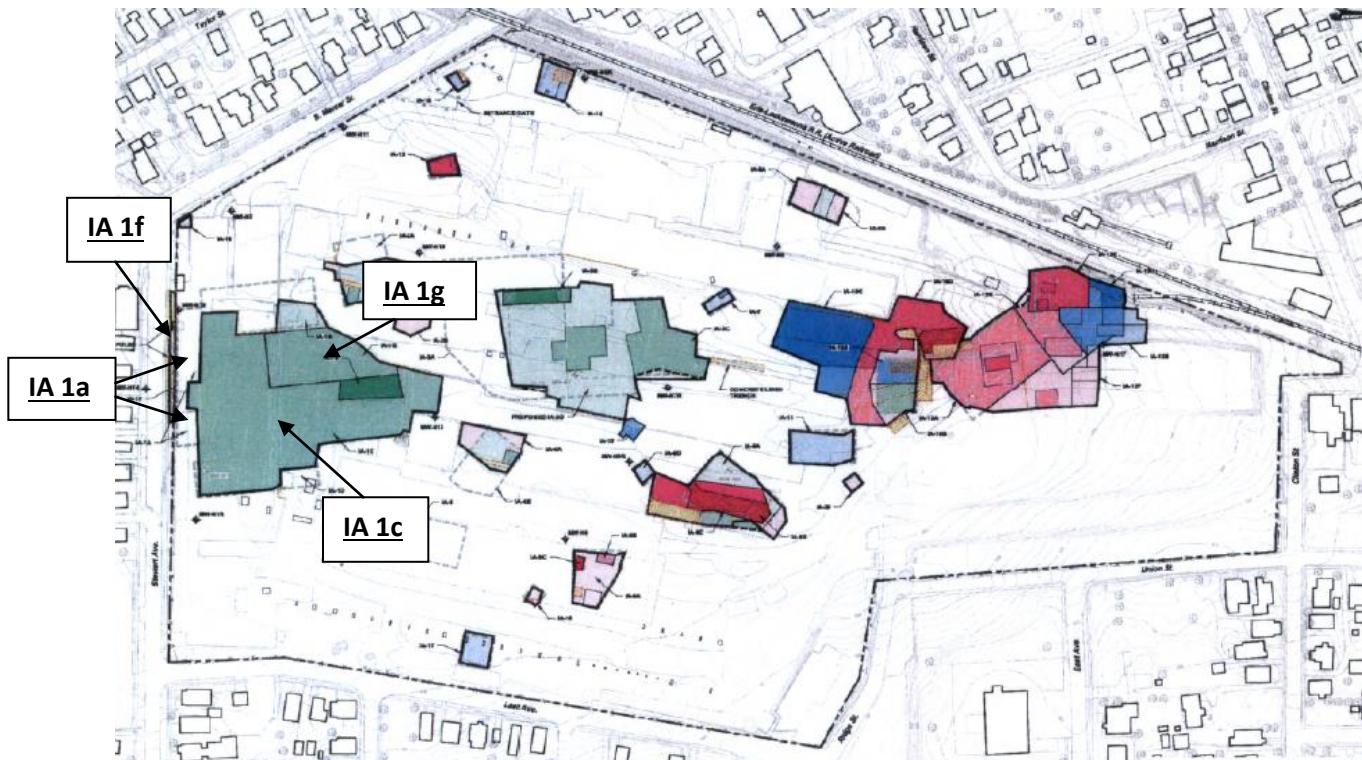
FOF 430. There are four IAs in AOC-N25, i.e., IA 1a, 1c, 1f, and 1g. (Trinity pls. Ex. 83.) The primary contaminant in IAs 1a, 1c, 1f, and 1g was lead. (Trinity pls. Ex. 14 at TRNGRNL068077-78.)

FOF 431. At least two soil bores were taken from AOC-N25. (Trinity pls. Ex. 16 at TRNGRNL070576.) The soil boring logs from those soil bores show that historic fill was retrieved from those soil bores. (TRINGRNL058793 and 98.)

FOF 432. There are two IAs in AOC-N26, i.e., IAs 1c and 1g. (Trinity pls. Ex. 83.) The primary contaminant in IA 1c and 1g was lead. (Trinity pls. Ex. 14 at TRNGRNL068077-78.)

FOF 433. At least one soil bore was taken from AOC-N26. (Trinity pls. Ex. 16 at TRNGRNL070576.) The soil boring log from that soil bore shows that historic fill was retrieved from that soil bore. (TRINGRNL058793 and 98.)

FOF 434. IAs 1a, 1c, 1f, and 1g are identified on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the four text boxes and five black arrows).)

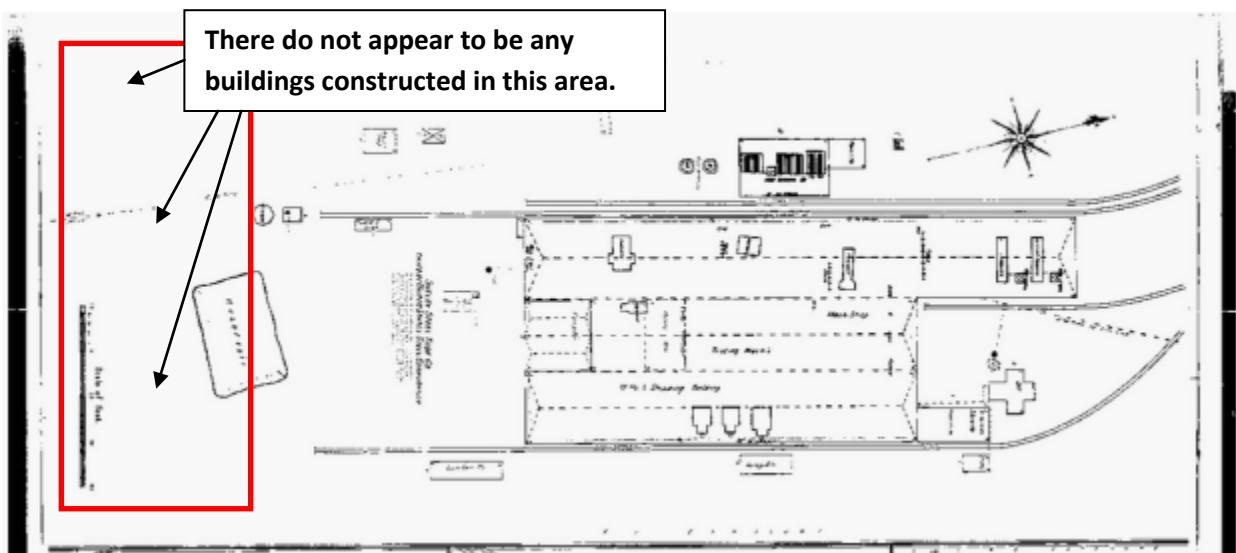
FOF 435. According to Gormley, the lead contamination in IAs 1a, 1c, 1f, and 1g was likely caused by Greenlease placing historic fill in those IAs or Greenlease's use of lead paint. (Gormley's Updated Expert Report dated December 2014, Table 4-1 at TRINGRNL058295.)

FOF 436. Gerritsen allocated responsibility to Greenlease for IAs 1a, 1c, 1f, and 1g to the extent a portion of those IAs is located within the 2.8-acre area on which Gerritsen opined Greenlease placed historic fill. (T.T. 4/24/15 (ECF No. 343) at 93; Greenlease Exs. NNNN, Revised SSSS, Revised TTTT, Revised VVVV.)

FOF 437. As discussed above, it is more likely than not that Greenlease placed historic fill in the reservoir to erect buildings on that location, which appears to be in and around 1A 1c.

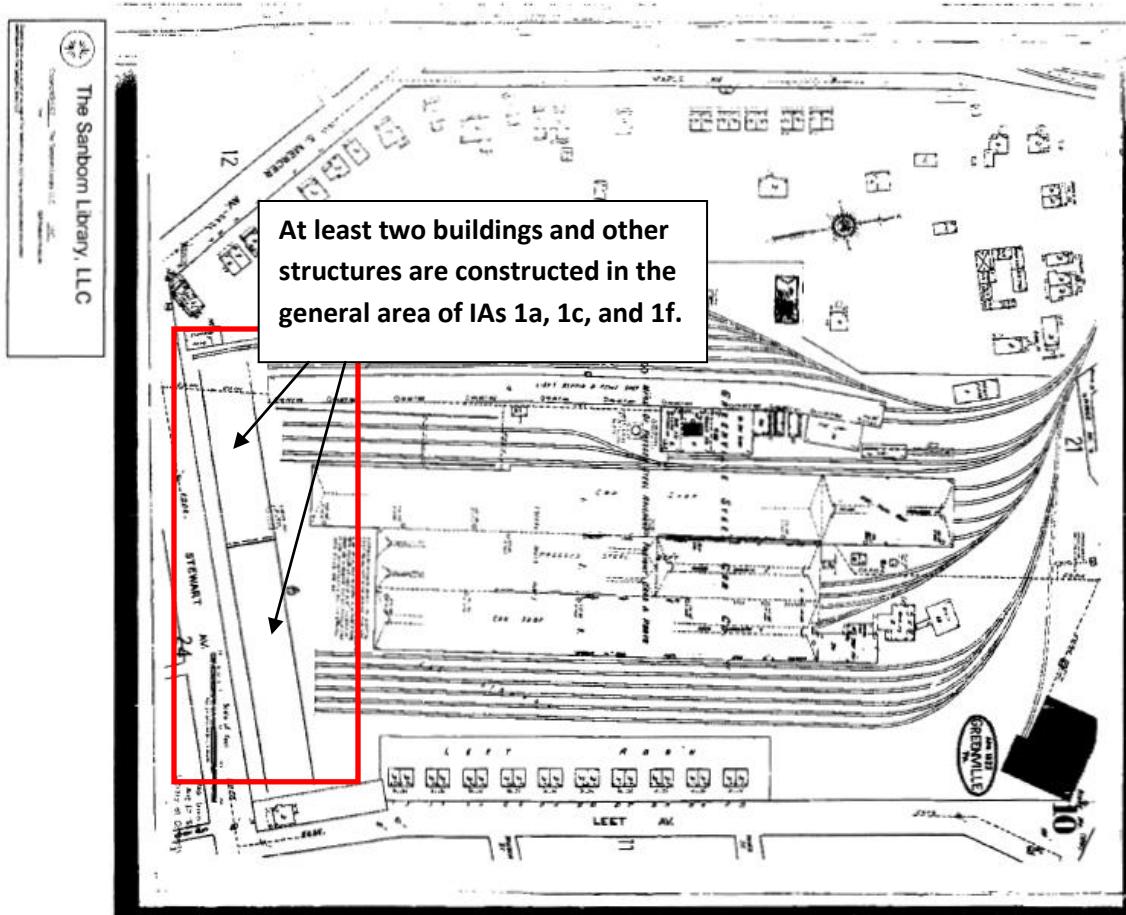
FOF 438. The 1904 Sanborn map shows that Shelby Steel did not construct any buildings in the area of IA 1a, 1c, or 1f. The 1922 Sanborn map shows that Greenlease erected buildings in the area of IAs 1a, 1c, and 1f.

1904 Sanborn map



(Trinity pls. Ex. 3 at TRINGRINL048767 (emphasis added, i.e., the text box, red rectangle, and three black arrows).)

The 1922 Sanborn map



(Trinity pls. Ex. 3 at TRINGRNL048769 (emphasis added, i.e., the text box, red rectangle, and two black arrows).)

FOF 439. Historic fill was required to develop the North Plant, i.e., the hollow in which the North Plant was situated and included IAs 1a, 1c, and 1f. (T.T. 4/24/15 (ECF No. 343) at 75-76.)

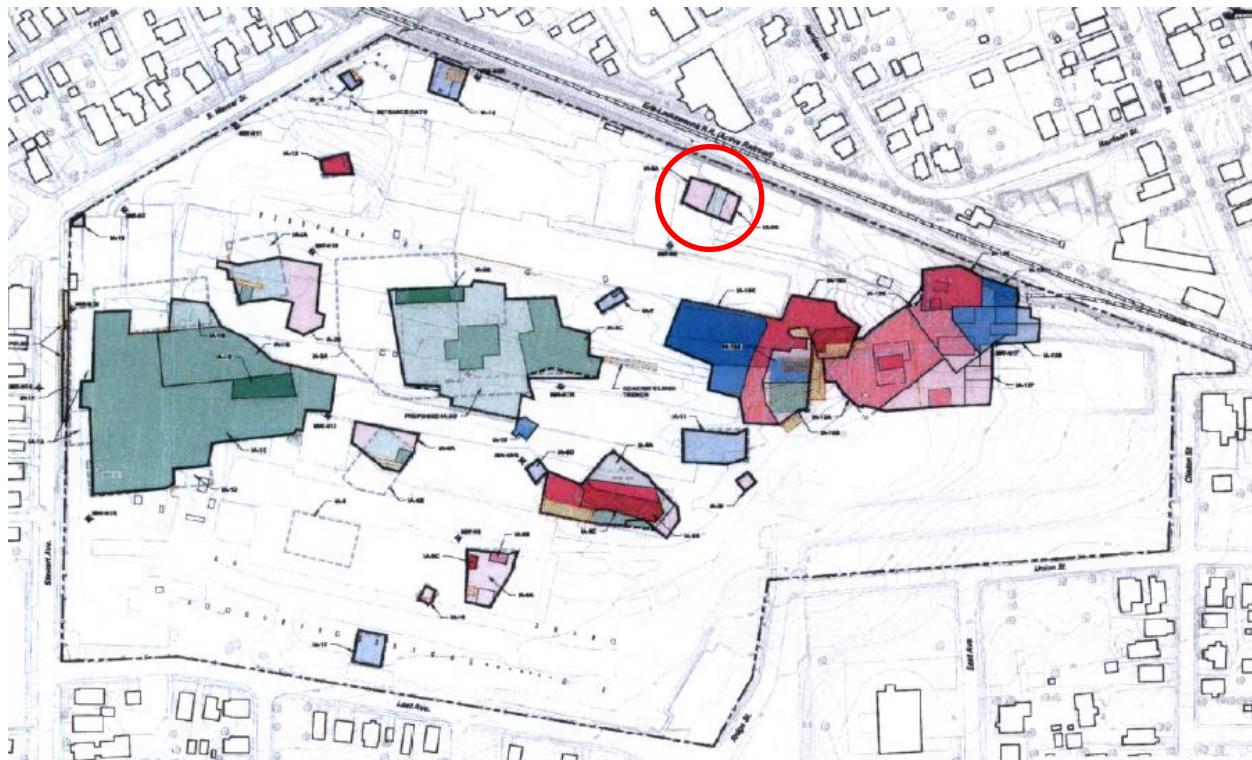
FOF 440. Based upon the foregoing, it is more likely than not that Greenlease caused the lead contamination in IAs 1a, 1c, 1f, and 1g by placing historic fill prior to developing that area.

FOF 441. AOC-N29 is a former equipment pad with concrete staining and oily water in the surrounding trench. Gormley allocated 52% to Greenlease and 48% to Trinity for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 10.) AOC-N29 is outlined on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

FOF 442. There are two IAs in AOC-N29, i.e., IAs 6a and 6b. (Trinity pls. Ex. 83.) The primary contaminant in IAs 6a and 6b was lead. (Trinity pls. Ex. 14 at TRNGRNL068077-78.) IAs 6a and 6b are circled on the map below.

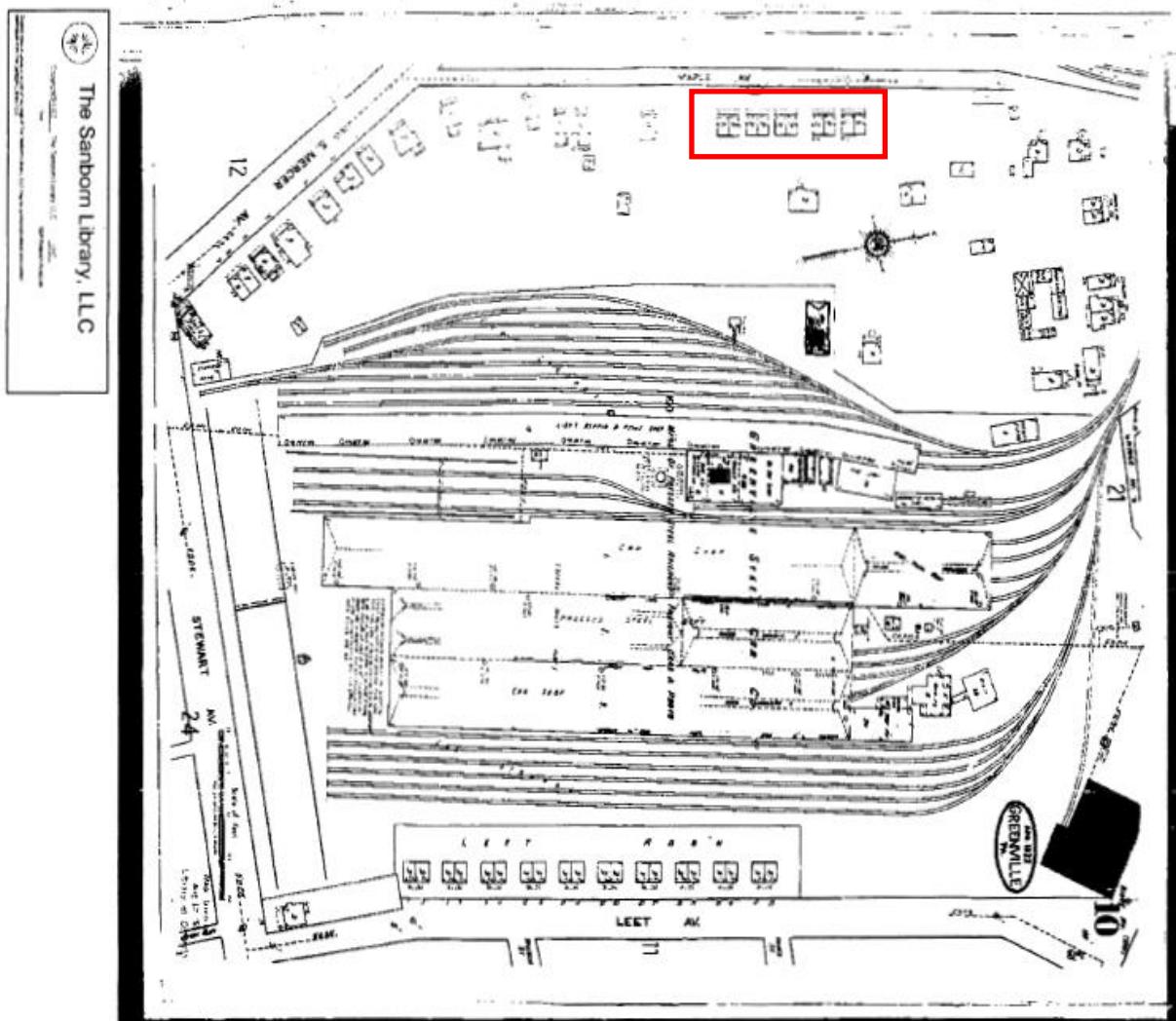


(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

FOF 443. At least seven soil bores were taken from AOC-N29. (Trinity pls. Ex. 16 at TRNGRNL070576.) The soil boring logs from those soil bores show that historic fill was retrieved from those soil bores. (Trinity pls. Ex. 11 at TRINGRNL058769, 71-74, 76, 78.)

FOF 444. According to Gormley, Greenlease and Trinity Industries, Inc. stored waste in AOC-N29. (Gormley's Updated Expert Report dated December 2014, Table 4-1 at TRINGRNL058296.) Gormley opines that Greenlease stored waste in that area for fifteen years and Trinity Industries, Inc. stored waste in that area for fourteen years. (Id.) Gormley explained that two years after Trinity Industries, Inc. began to store waste in AOC-N29, it used "improved environmental controls" in that area. (Id.)

FOF 445. The 1922 Sanborn map depicts residences on Maple Avenue, which ran alongside the Erie Lackawanna Railroad on the west side of the North Plant.



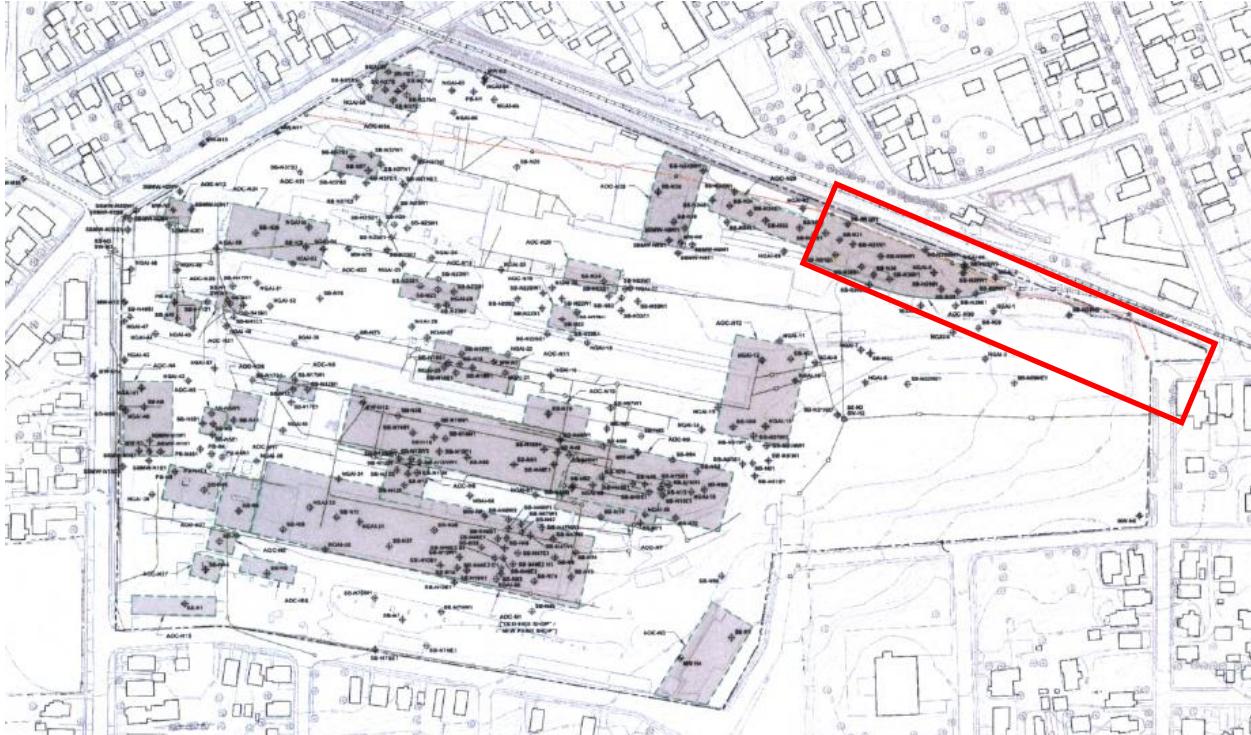
(Trinity pls. Ex. 3 at TRINGRNL048769 (emphasis added, i.e., the red rectangle).)

FOF 446. Gormley acknowledged that there were residences located in AOC-N29 for sixty years prior to Greenlease owning and operating a waste storage area in that location of the North Plant. (Gormley's Updated Expert Report dated December 2014, Table 4-1 at TRINGRNL058296.)

FOF 447. Gerritsen testified that historic fill would have been required to construct the residences on the western side of the North Plant. (4/24/15 (ECF No. 343) at 78-79.)

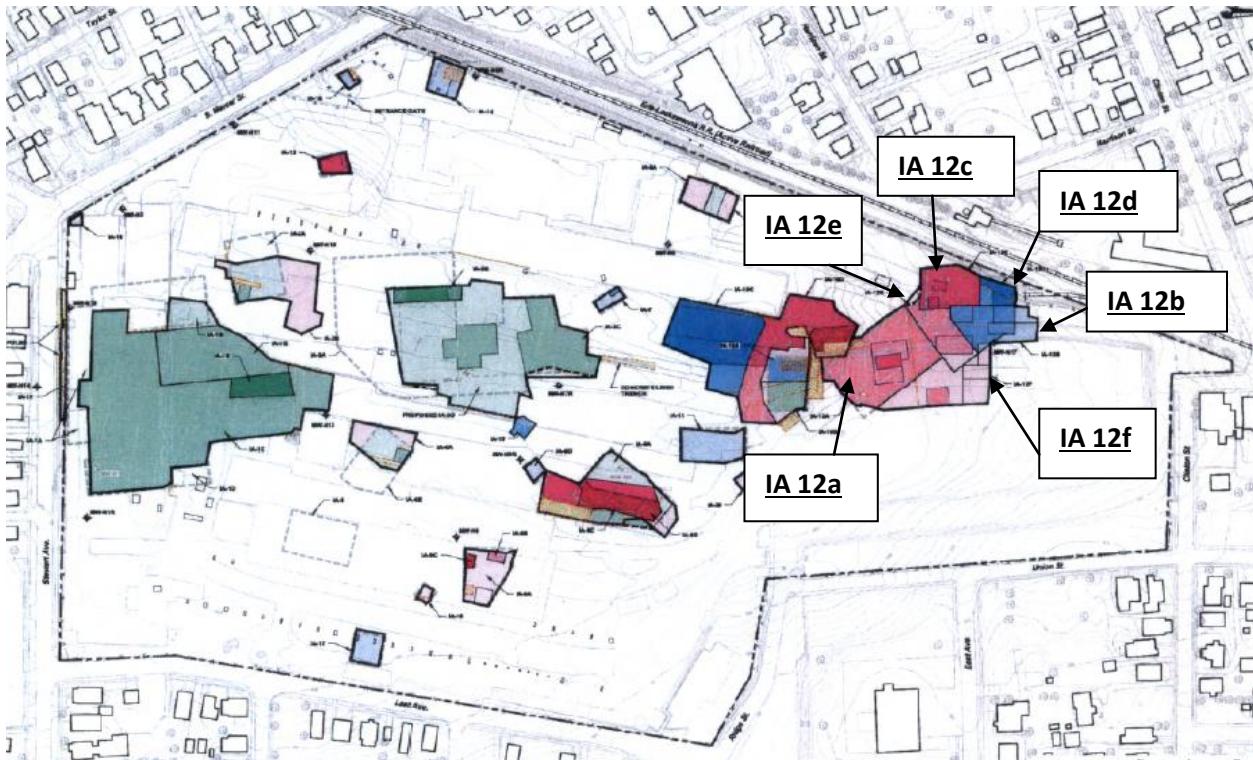
FOF 448. Based upon the foregoing, it is more likely than not that the lead contamination that required remediation in IAs 6a and 6b was caused by historic fill placed by third parties other than Greenlease or the Trinity plaintiffs.

FOF 449. AOC-N30 is a former chemical storage area covered in grass, gravel, and asphalt with rusty drums and an above-ground storage tank. Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. The constituents of concern in that area were metals in surface soil and in subsurface soil. There were also pesticides found in the subsurface soil. (T.T. 4/21/2015 (ECF No. 341) at 10.) AOC-N30 is highlighted on the map below.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

FOF 450. There are six IAs in AOC-N30, i.e., IAs 12a-12f. (Trinity pls. Ex. 83.) The primary contaminant in IA 12a-12f was lead. (Trinity pls. Ex. 14 at TRINGRNL068081.) IA 12a-12f are identified on the map below.



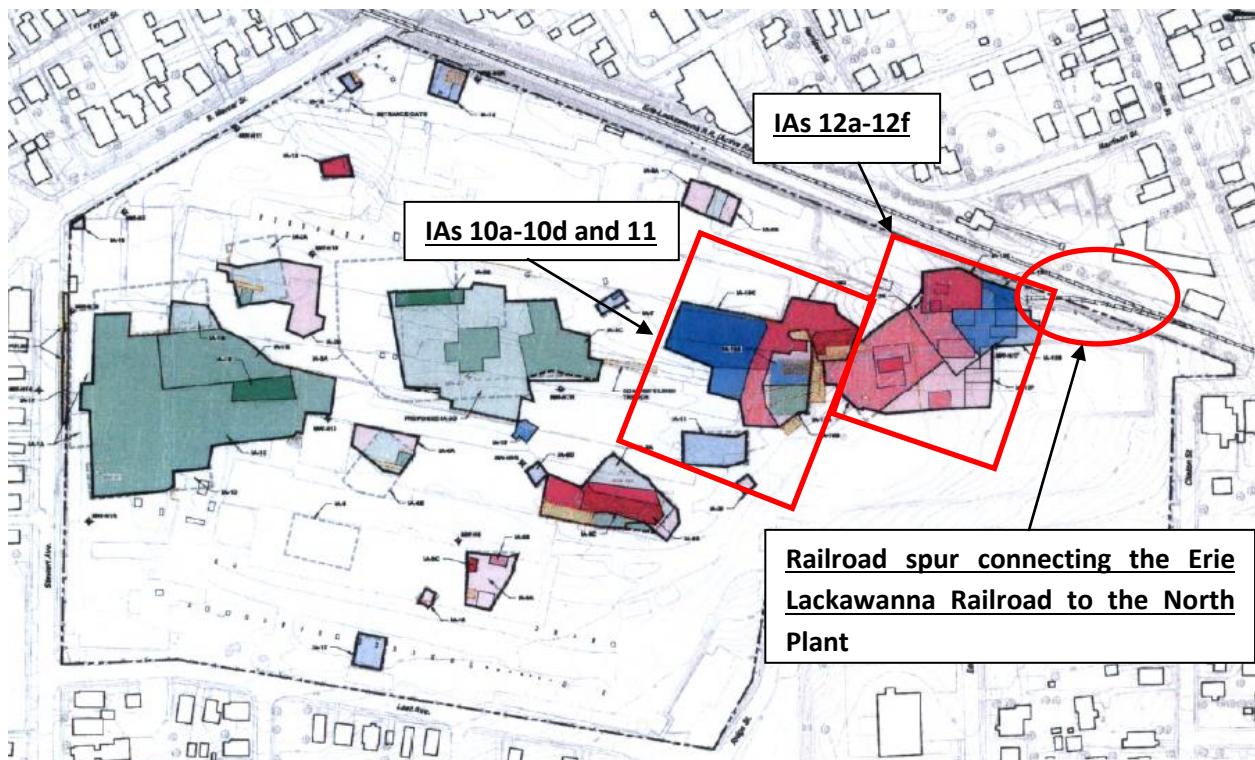
(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the six text boxes and six black arrows).)

FOF 451. At least sixteen soil bores were taken from AOC-N30. (Trinity pls. Ex. 16 at TRNGRNL070576.) The soil boring logs from those soil bores show that historic fill was retrieved from all but one of those soil bores. (TRINGRNL058753-55, 57-63, 65-70.)

FOF 452. Gormley opines that the lead contamination requiring remediation was likely caused by Greenlease placing historic fill in IA 12a-12f. (Gormley's Updated Expert Report dated December 2014, Table 4-1 at TRINGRNL058296.)

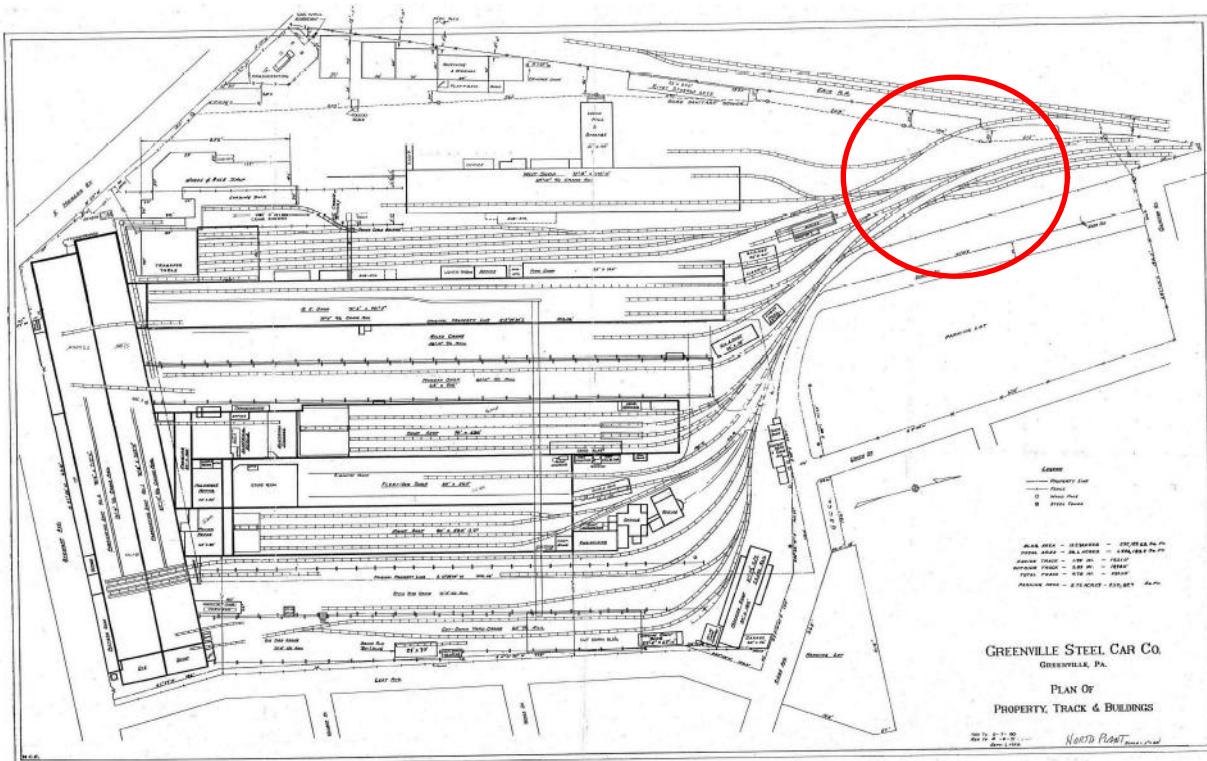
FOF 453. As discussed above with respect to AOC-N12 and IAs 10a-10d and 11, there is evidence that Shelby Steel constructed a railroad track to connect the North Plant to the Erie Lackawanna Railroad, which borders the easternmost portion of the North Plant.

FOF 454. IAs 12a-12f are situated between IAs 10a-10 and 11 and the rail road spur connecting the Erie Lackawanna Rail Road to the railroad tracks at the North Plant as shown in the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the three text boxes, two red rectangles, one red oval, and three black arrows).)

FOF 455. The historic site map dated February 7, 1980, shows that there are at least seven railroad tracks in the area of IAs 12a-1f.



(Trinity pls. Ex. 11 at TRINGRNL058661 (emphasis added, i.e., the red circle).)

FOF 456. As discussed above, Gerritsen explained that the rail lines must be “built up” and stabilized with historic fill because “a lot of weight is going to be coming on” to that area. (T.T. 4/24/15 (ECF No. 343) at 81.)

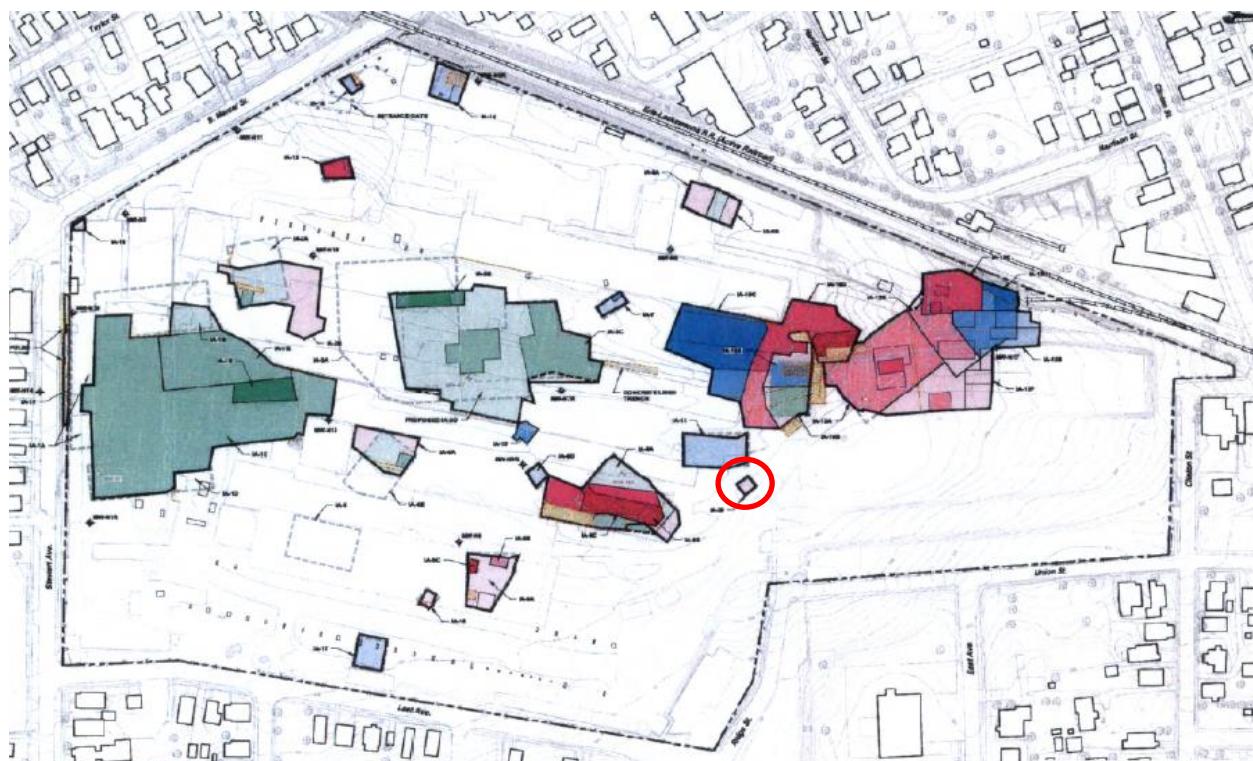
FOF 457. Based upon the foregoing, including the evidence that Shelby Steel constructed one railroad track in the area of IAs 12a-12f and Greenlease constructed six additional railroad tracks in the areas of IAs 12a-12f, it is more likely than not that Greenlease caused 86% of the lead contamination that required remediation in IAs 12a-12f, which represents six out of the seven railroad tracks that it constructed in that area.

FOF 458. AOC-N31 is broken up into several different areas, which include former railroad track switch locations across the entire site. Gormley allocated 96% to Greenlease and 4% to Trinity for all constituents of concern. The constituents of concern in the surface soil were

aroclor 1232, which is a PCB. The constituents of concern in the subsurface soil were metals. (T.T. 4/21/2015 (ECF No. 341) at 10-11.)

FOF 459. There is one IA in AOC-N31, i.e., IA 20. (Greenlease Ex. Revised TTTT.)

The primary contaminant in IA 20 was PCBs. (Trinity pls. Ex. 14 at TRNGRNL068077-78.) IA 20 is circled on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle.))

FOF 460. PCB oils are used in transformers, which are “electrical equipment used to change the voltage from the main line coming into the plant and then to be distributed to engines...at the facility.” (T.T. 2/24/15 (ECF No. 343) at 97-98.) There were transformers that had PCB oils in them on the North Plant during Greenlease’s and Trinity Industries, Inc.’s operations of the North Plant. (Id. at 98.) The transformers sometimes leaked PCB oils. (Id.) Golder investigated the areas in which the transformers were located at the North Plant. (Id.)

PCB contamination was not found in those areas. (Id. at 99.) PCB oil contamination was found only in IA 20 at the North Plant. (Id.)

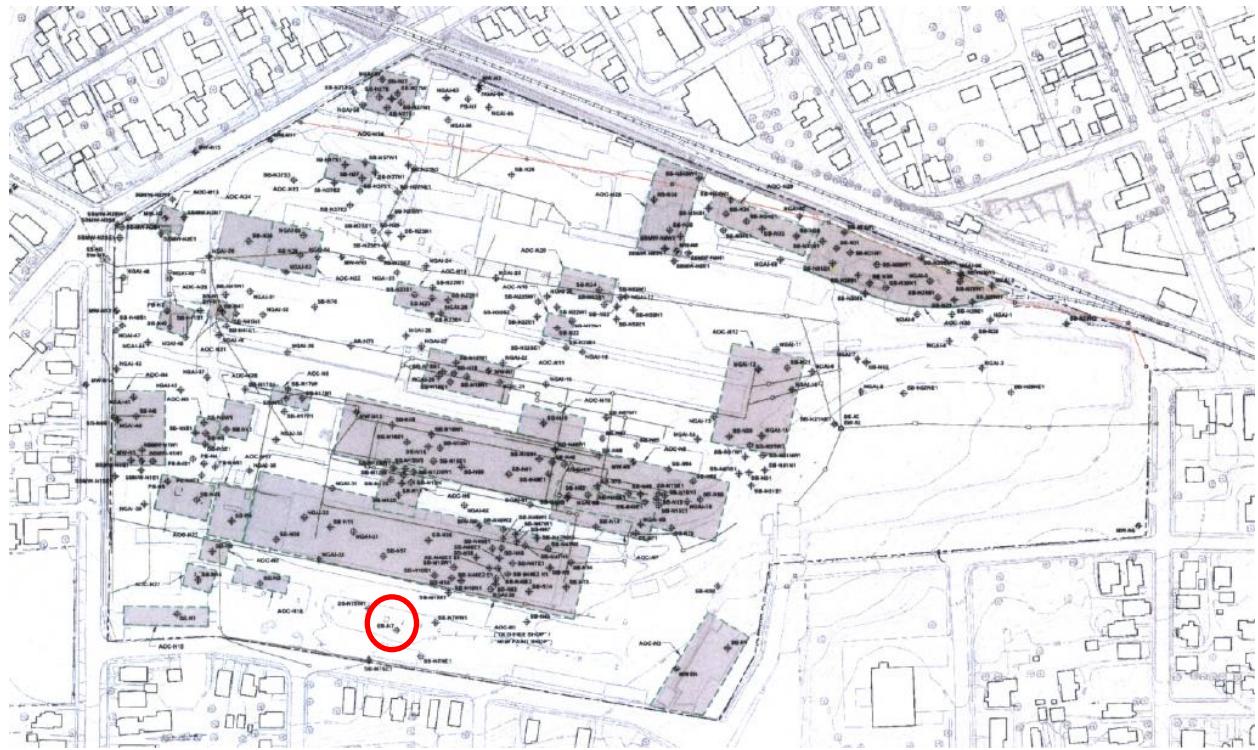
FOF 461. IA 20 was located near a rail switch. (T.T. 2/24/15 (ECF No. 343) at 99.) Evidence was presented that the Trinity plaintiffs used PCB oils to lubricate railroad switches at the North Plant. (Id.; Greenlease Ex. K ¶ 21.)

FOF 462. Gerritsen opined that the PCB contamination that required remediation in IA 20 was caused by Trinity Industries, Inc. using PCB oil to lubricate the railroad switch in the area of IA 20. (T.T. 2/24/15 (ECF No. 343) at 101-02.)

FOF 463. Gormley opined that the PCB contamination that required remediation in IA 20 was “likely the result of a release of PCB contaminated oil in a nearby transformer or use of PCB contaminated oil on railroad switches.” (Gormley’s Updated Expert Report dated December 201, Table 4-1 at TRINGRNL058296.)

FOF 464. Based upon the evidence that Trinity Industries, Inc. used PCB oil to lubricate railroad switches at the North Plant, and Gormley’s concession that the use of PCB oil at a railroad switch is a “Probable Source” of contamination, the court cannot find that the PCB contamination in IA 20 was caused by Greenlease’s operations on the North Plant.

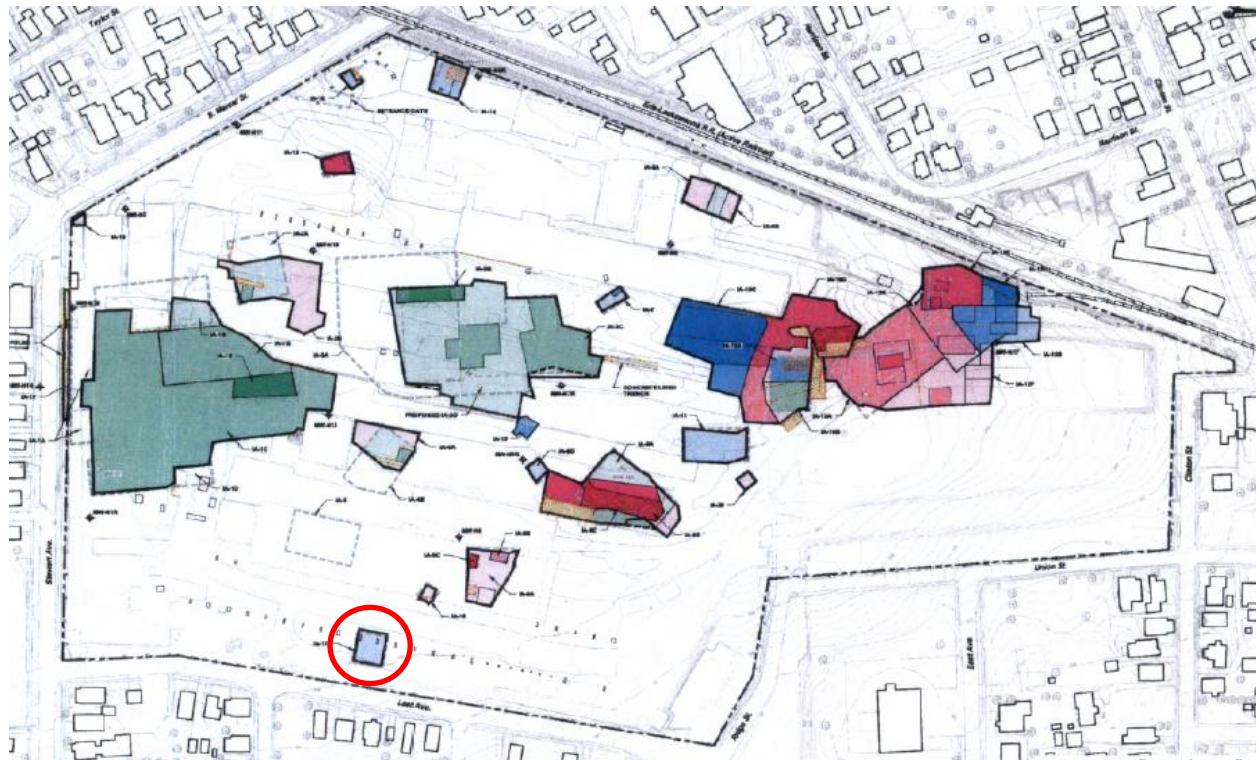
FOF 465. With respect to the boring SB-N7 area, Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. The constituents of concern in the surface soil were lead. (T.T. 4/21/2015 (ECF No. 341) at 11.) SB-N7 is circled on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

FOF 466. There is one IA associated with SB-N7, i.e., IA 17. (Trinity pls. Ex. 83.)

The primary contaminant that required remediation in IA 17 was lead. (Trinity pls. Ex. 14 at TRINGRNL068081.) IA 17 is circled on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

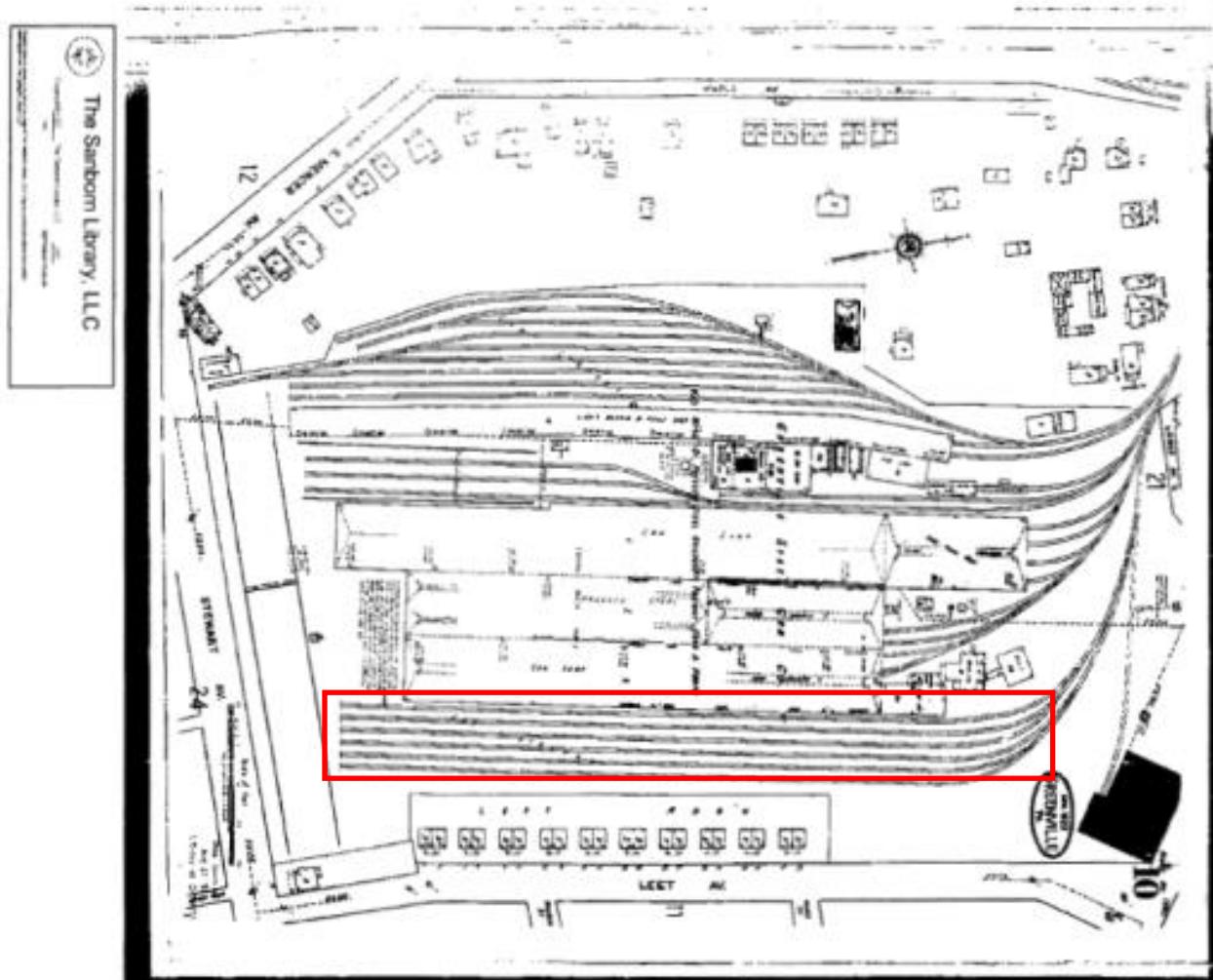
FOF 467. According to Gormley, Greenlease and Trinity Industries, Inc. operated a “railcar storage yard/cut-down yard” in the area of SB-N7. (Gormley’s Updated Expert Report dated December 2014, Table 4-1 at TRINGRNL058297.)

FOF 468. The soil boring log for SB-N7 shows that historic fill was retrieved from that soil bore. (Trinity pls. Ex. 11 at TRINGRNL058673.)

FOF 469. Gormley attributes the lead contamination that required remediation in SB-N7 to “touchup painting” with “lead-based paint.” (Gormley’s Updated Expert Report dated December 2014, Table 4-1 at TRINGRNL058297.)

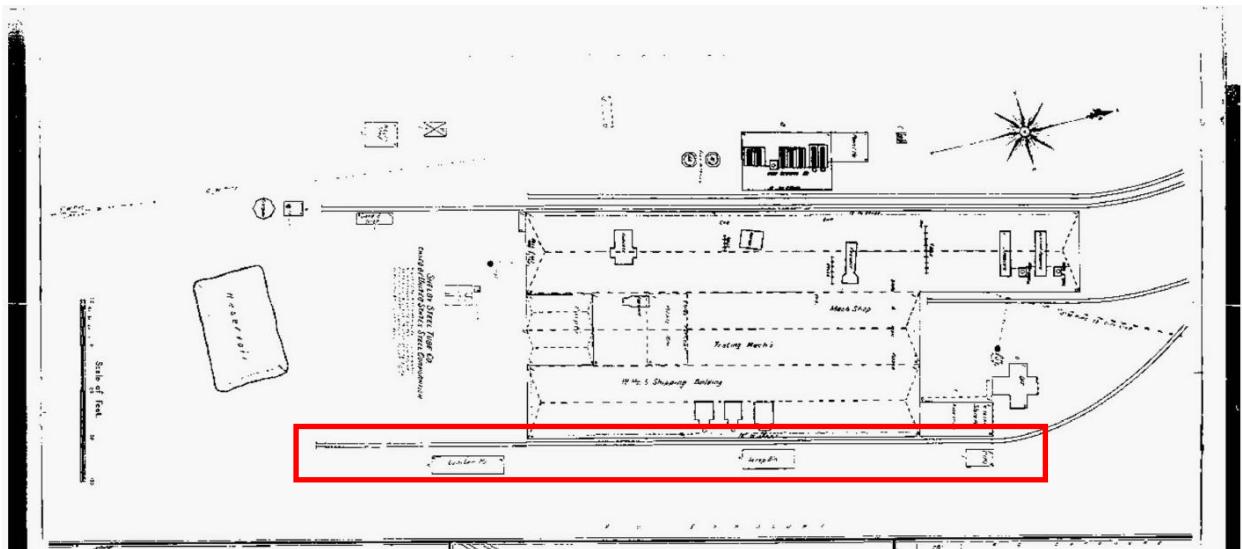
FOF 470. Gerritsen attributes the lead contamination that required remediation in the area of boring SB-N7 to Shelby Steel placing historic fill in that location in order to build there. (T.T. 4/24/15 (ECF No. 343) at 89-91; Greenlease Ex. MMMM at 2.)

FOF 471. The railyard in the area of SB-N7 and IA 17 is depicted in the 1922 Sanborn map below.



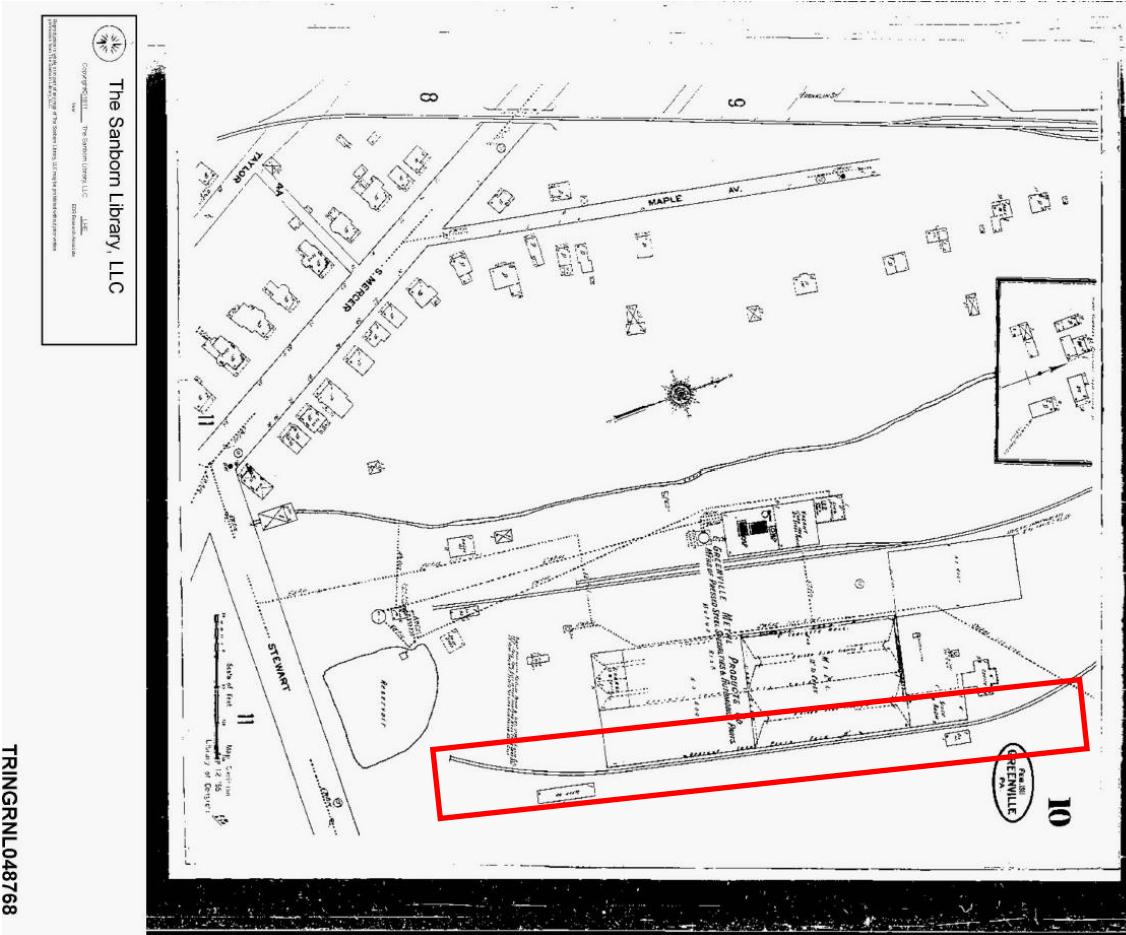
(Trinity pls. Ex. 3 at TRINGRNL048769 (emphasis added, i.e., the red rectangle).)

FOF 472. The 1904 Sanborn map shows that Shelby Steel constructed one rail line and three small structures west of SB-N7 and IA 17.



(Trinity pls. Ex. 3 at TRINGRINL048767 (emphasis added, i.e., the red rectangle).)

FOF 473. The 1911 Sanborn map shows one rail line and two small structures in the area west of SB-N7 and IA 17.



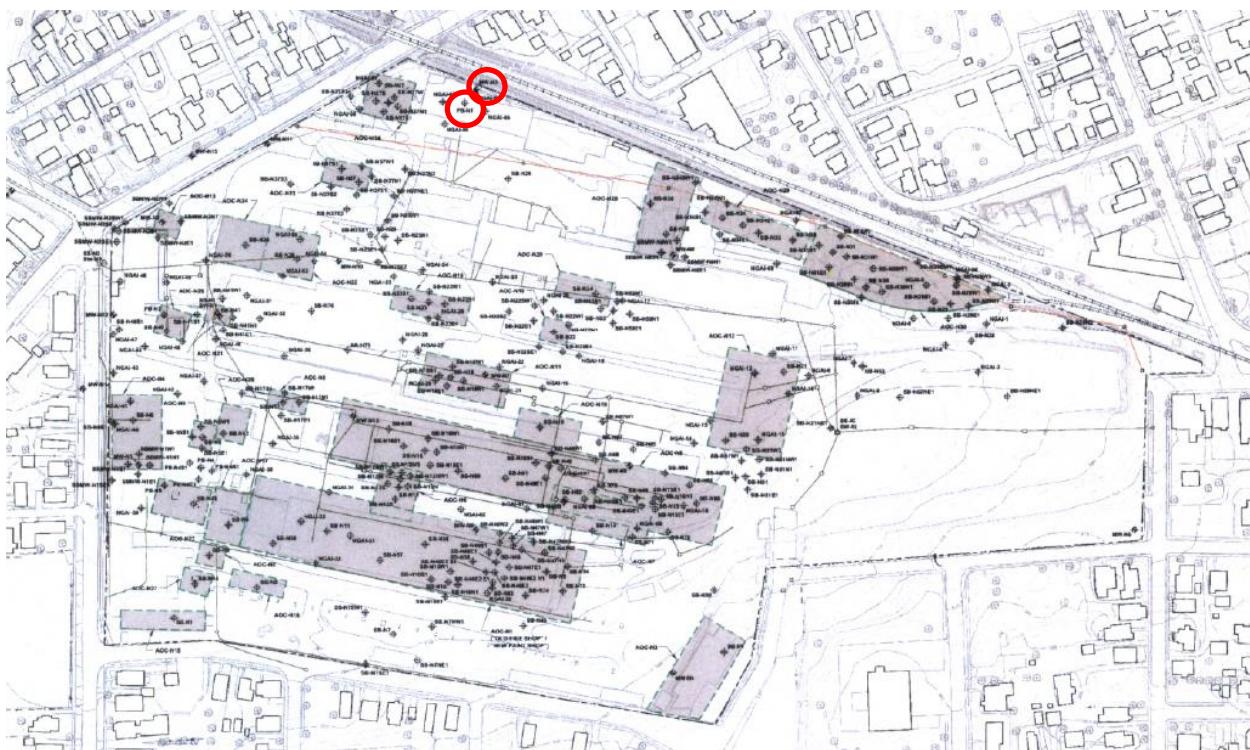
(Trinity pls. Ex. 3 at TRINGRNL048768 (emphasis added, i.e., the red rectangle).)

FOF 474. By 1922, Greenlease removed the two structures east of the single rail line installed by Shelby Steel and added five additional rail lines to that area, as depicted in the 1922 Sanborn map above.

FOF 475. Historic fill was required to fill the hollow and build upon the area of SB-N7 and IA 17 on which Greenlease constructed five additional rail lines. (T.T. 4/24/15 (ECF No. 343) at 75-76.) Gerritsen explained that the rail lines at the North Plant must be “built up” and stabilized because “a lot of weight is going to be coming on” to that area. (T.T. 4/24/15 (ECF No. 343) at 81.)

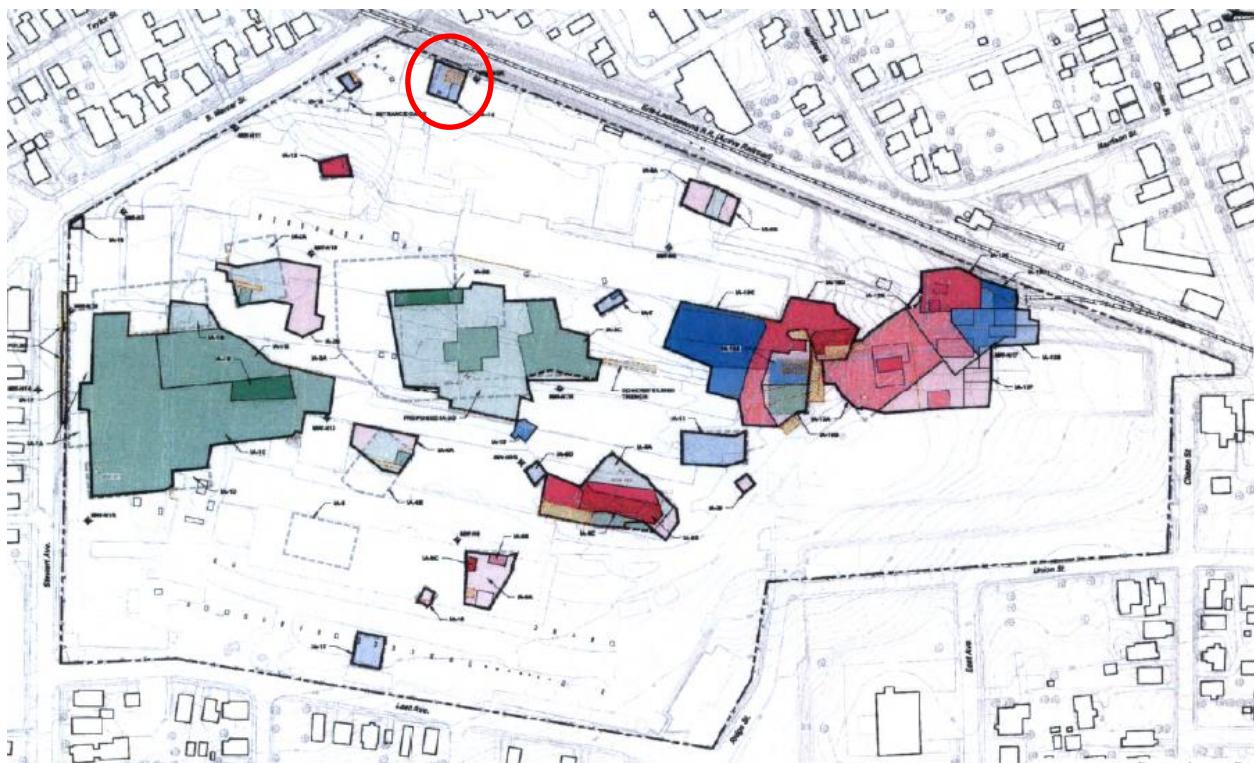
FOF 476. Based upon the foregoing, it is more likely than not that the lead contamination that required remediation found in IA 17 was caused by Greenlease placing historic fill in that area to build an additional five rail lines.

FOF 477. With respect to MW-N3 and PB-N1, Gormley allocated 100% to Greenlease and 0% to Trinity for all constituents of concern. (Trinity pls. Ex. 83.) The constituents of concern in the surface soil were manganese. (Trinity pls. Ex. 14 at TRINGRNL 068081.) MW-N3 and PB-N1 are circled on the map below.



(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the two red circles.))

FOF 478. There is one IA associated with MW-N3 and PB-N1, i.e., IA 14. (Trinity pls. Ex. 83.) The primary contaminant that required remediation in IA 14 was manganese. (Trinity pls. Ex. 14 at TRINGRNL068081.) IA 14 is circled on the map below.



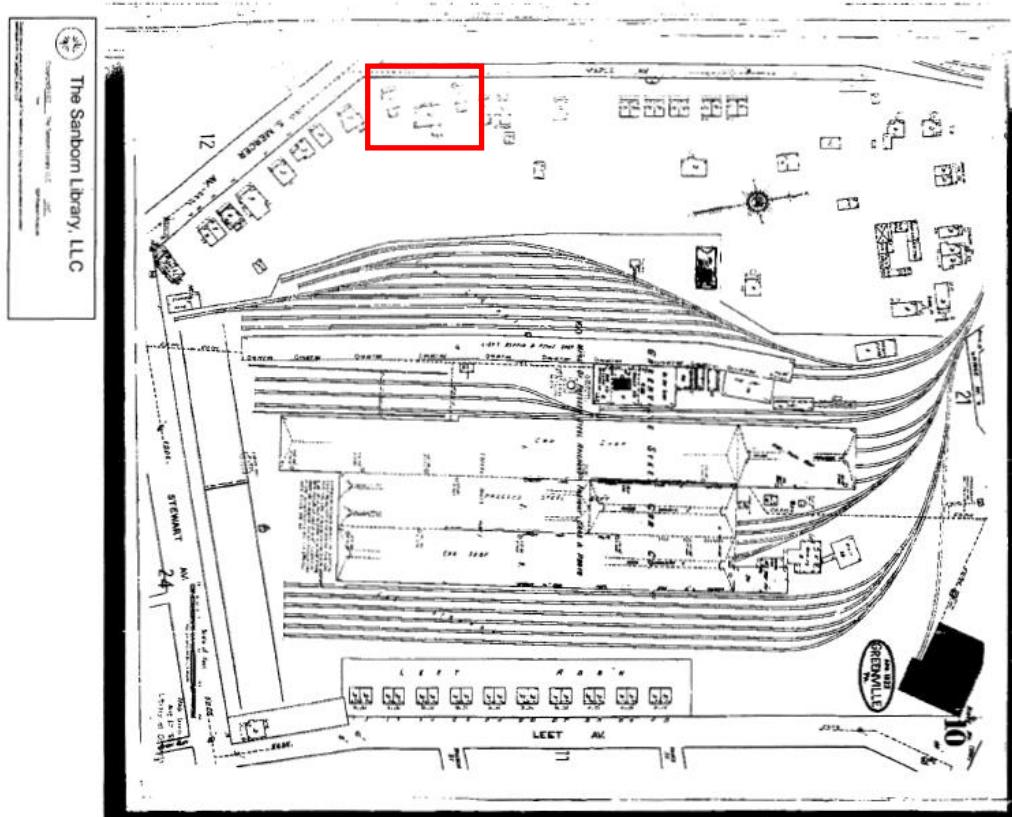
(Trinity pls. Ex. 16 at TRINGRNL070577 (emphasis added, i.e., the red circle).)

FOF 479. Gormley first determined the primary contaminant of manganese in IA 14 “was likely related to air deposition from railroad sources” and did not require remediation. (T.T. 4/23/15 (ECF No. 342) at 59.) Gormley—after the PaDEP required the cleanup of IA 14—changed his opinion and determined based upon his observations at the North Plant during the excavation that the manganese in IA 14 was caused by historic fill deposited by Greenlease. (Id.) Gormley explained that during the excavation of IA 14 he saw that the contaminants were not only at the surface level; rather, there was fill brought to level that area, which was also used in other areas of the North Plant. (Id. at 59-60.) Golder did not examine the other side of the railroad tracks, i.e., the side of the railroad tracks that is not on the North Plant property, to determine whether or not the contaminants and his findings with respect to the soils next to the

railroad tracks that are on the North Plant property were consistent on that side of the railroad tracks. (Id. at 60.)

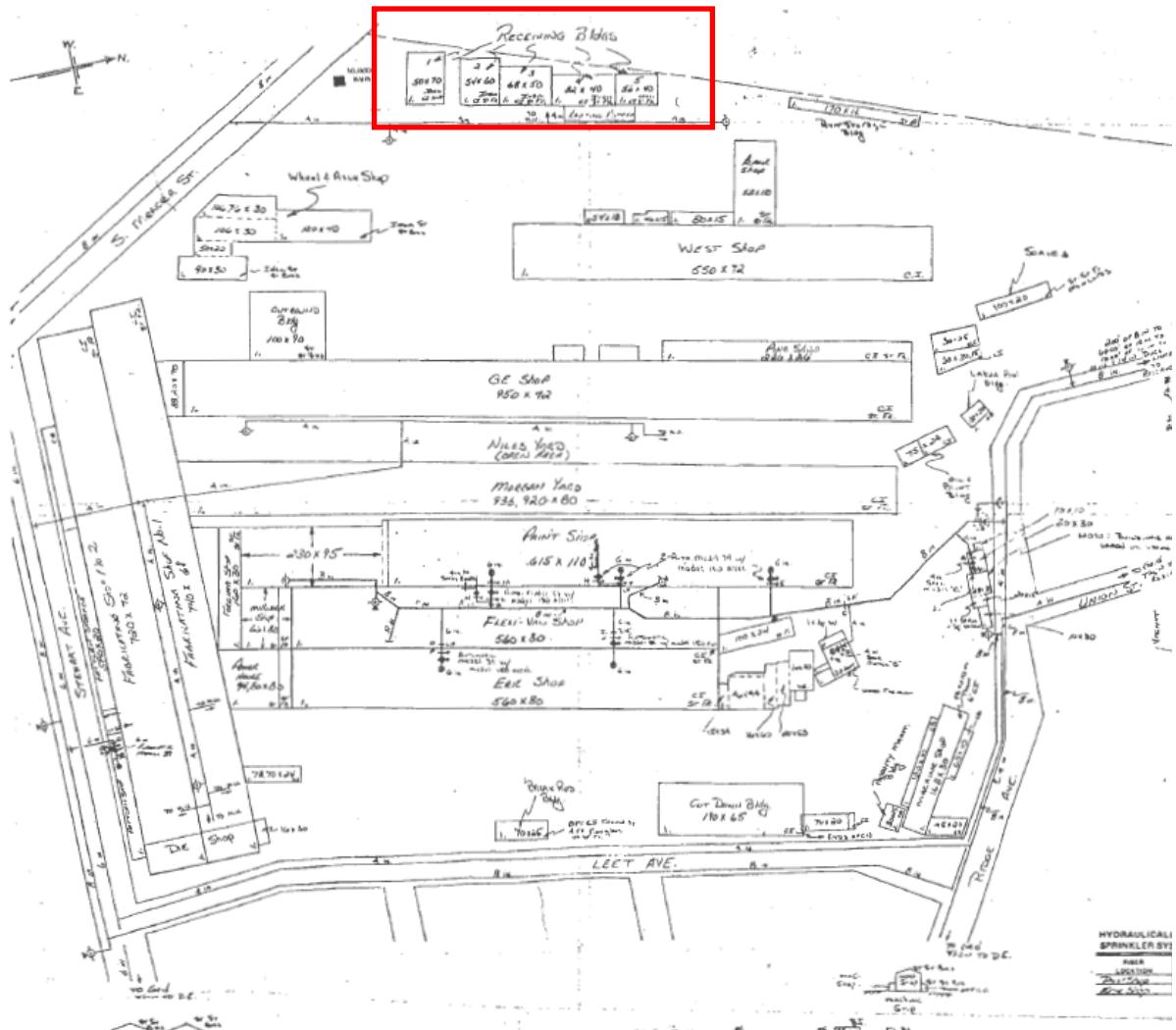
FOF 480. Gerritsen testified that historic fill would have been required to construct the residences on the western side of the North Plant. (4/24/15 (ECF No. 343) at 78-79.)

FOF 481. The 1922 Sanborn map shows there were residences in the area of IA 14, which Greenlease did not own at the time.



(Trinity pls. Ex. 3 at TRINGRNL048769 (emphasis added, i.e., the red rectangle).)

FOF 482. A drawing of the North Plant dated June 5, 1981, shows that Greenlease constructed “receiving buildings” in the area of IA 14.



(Trinity pls. Ex. 12 at TRINGRNL067553 (emphasis added, i.e., the red rectangle).)

FOF 484. In light of Gormley changing his opinion with respect to the cause of the manganese contamination that required remediation once the PaDEP required that area to be remediated and Gerritsen's testimony that historic fill was necessary to construct the residences that existed on the western border of the North Plant prior to Greenlease owning that area, it is more likely than not that third parties other than Greenlease or the Trinity plaintiffs placed the historic fill that caused the manganese contamination that required remediation in IA 14.

III. Conclusions of Law (“COL”)¹⁴

Claims for Contribution under § 9613(f)(3)(B) of the CERCLA and section 6020.705(c)(2) of the HSCA

¹⁴ After the parties filed a joint exhibit list, Greenlease filed a motion to strike exhibit 50 from the joint exhibit list. (ECF No. 359.) Exhibit 50 is a declaration of Albert Beers, who—according to the declaration—is a former employee of Greenlease and Trinity Industries, Inc. (Trinity pls. Ex. 50.) Greenlease prior to trial objected to the introduction into evidence of the declaration because it constituted inadmissible hearsay. (ECF No. 299.) The court agreed with Greenlease and held:

Well, the Beers Declaration is an easy one. It can come in as part of -- it doesn't come in as substantive evidence, period. It is not something – you can't cite to it independently as evidence. It was something that was reviewed by the expert. And so it's part of the expert.

And if the other side wants to cross-examine him about that, and whether it was something that was, you know, goes to the weight of the opinion he's giving, they can do that there. But it's not substantive evidence, it can't be cited to independently. It doesn't come in as evidence.

Just like the expert reports are not evidence. They do not come into evidence. Whatever the expert's testified -- I don't know if they're coming in through depositions, that's what I'm assuming. The experts -- I don't know, are they going to be live?

(T.T. 4/20/15 (ECF No. 316) at 5-6.) Greenlease in its motion to strike argues that it did not cross-examine Gormley about exhibit 50, but the Trinity plaintiffs identified it as an exhibit the could should consider with respect to its findings of fact and conclusions of law. (ECF No. 359 at 2.) The Trinity plaintiffs in their response in opposition to Greenlease's motion to strike asserts they “did not purport to designate Exhibit 50 in the Parties' Joint List of Exhibits (Doc. 357), to serve as “independent” substantive evidence[;]” rather, they “identified the Exhibit for the limited purpose the Court held the Exhibit appropriately could be used for purposes of trial—as Rule 703 material relied upon by the Trinity Plaintiffs' expert to form opinions.” (ECF No. 360 at 1.)

The court in accordance with its ruling prior to the bench trial did not consider exhibit 50 as substantive evidence. Exhibit 50 was a document Gormley relied upon to form his opinions in this case. The court considered exhibit 50 only to evaluate Gormley's expert opinion. Greenlease's motion to strike (ECF No. 359) will, therefore, be denied as moot.

COL 1. “Both CERCLA, 42 U.S.C. § 9601, and the Superfund Amendments and Reauthorization Act (“SARA”), were enacted to provide for liability and remediation of hazardous substances in the environment and for cleanup of inactive hazardous waste sites.” N.J. Turnpike Auth. v. PPG Indus., Inc., 97 F.3d 96, 103 (3d Cir. 1999).

COL 2. “Section 113 of SARA provides that ‘[a]ny person may seek contribution from any other person who is liable or potentially liable under [§ 107], during or following any civil action under [§ 107].’” New Castle Cnty. v. Halliburton NUS Corp., 111 F.3d 1116, 1120 (3d Cir. 1997).

COL 3. “In order to prove CERCLA liability under section 107, a plaintiff must prove: (a) that the defendant is a [potentially responsible party]; (b) that hazardous substances were disposed of at a ‘facility’; (c) that there has been a ‘release’ or ‘threatened’ release of hazardous substances from the facility into the environment; and (d) that the release or threatened release has required or will require the plaintiff to incur ‘response costs.’” N.J. Turnpike Auth., 97 F.3d at 103-03 (quoting 42 U.S.C. § 9607(a).)

COL 4. A potentially responsible party (“PRP”) includes: (a) the current owner or operator of a facility; (b) any person who owned or operated the facility at the time of the disposal of a hazardous substance; (c) any person who arranged for disposal or treatment, or arranged for transport for disposal or treatment of hazardous substances at a facility; and (d) any person who accepts or accepted hazardous substances for transport to sites selected by such person. New Castle Cnty., 111 F.3d at 1120 n.2 (citing 42 U.S.C. § 9607(a)(1)-(4)).

COL 5. “A section 113 contribution action allows a PRP to recover a portion of its expenditures when that PRP believes that it has assumed a share of the costs that is greater than

its equitable share under the circumstances.” N.J. Turnpike Auth., 197 F.3d at 104. “A section 113 plaintiff must demonstrate that the defendants are liable or potentially liable under 107; the elements for both claims are essentially the same.” Id.

COL 6. “Once liability has been determined, the court allocates the remediation costs among the PRPs ‘using such equitable factors as [it] determines are appropriate.’” Litgo, 725 F.3d at 379 (quoting 42 U.S.C. § 9613(f)).

COL 7. The Third Circuit Court of Appeals has held that the “cost recovery and contribution provisions” contained in the HSCA to be “virtually identical” to those contained in the CERCLA. Agere Sys., Inc. v. Advanced Env'tl. Tech. Corp., 602 F.3d 204, 227-29 (3d Cir. 2010).

COL 8. This court in an opinion dated August 5, 2014, granted summary judgment to the Trinity plaintiffs and held as a matter of law that Greenlease is a liable party for contribution with respect to the cleanup at the North Plant under § 9613(f)(3)(B) of the CERCLA and section 6020.705(c)(2) of the HSCA. (ECF No. 240 at 19; ECF No. 241.)

COL 9. The Trinity plaintiffs—having incurred the costs of cleaning up the North Plant—may seek contribution from Greenlease as a liable party under § 9613(f)(3)(B) of the CERCLA and section 6020.705(c)(2) of the HSCA.

COL 10. The Trinity plaintiffs seek to recover response costs incurred in an area of the South Plant where the Trinity plaintiffs dumped contaminated soils excavated from the old Erie paint shop at the North Plant. (Trinity pls. Ex. 82.)

COL 11. The Trinity plaintiffs, however, did not present any evidence to show that Greenlease is a potentially responsible party with respect to the South Plant; indeed, there was no evidence presented to show that Greenlease: (a) is the current owner or operator of the South

Plant; (b) owned or operated the South Plant at the time of the disposal of a hazardous substance; (c) arranged for disposal or treatment, or arranged for transport for disposal or treatment of hazardous substances at the South Plant; or (d) accepted hazardous substances for transport to the South Plant. See 42 U.S.C. § 9607(a)(1)-(4).

COL 12. Under those circumstances, Greenlease is not a potentially responsible party with respect to the South Plant, and the Trinity plaintiffs are not entitled to contribution for the response costs incurred in remediating the South Plant.

The Trinity Plaintiffs' Claims Under the HSCA sections 701, 702, and 1101

COL 13. Section 6020.1101 declares “[a] release of a hazardous substance” to be a “public nuisance.” 35 PA. STAT. § 6020.1101. That statutory provision renders “[a]ny person allowing such a release...liable for the response costs caused by the release.” Id. A person’s responsibility for such a release is controlled by section 6020.701(a), which provides:

§ 6020.701. Responsible person

(a) General rule.—Except for releases of hazardous substances expressly and specifically approved under a valid Federal or State permit, a person shall be responsible for a release or threatened release of a hazardous substance from a site when any of the following apply:

(1) The person owns or operates the site:

(i) when a hazardous substance is placed or comes to be located in or on a site;

(ii) when a hazardous substance is located in or on the site, but before it is released; or

(iii) during the time of the release or threatened release.

(2) The person generates, owns or possesses a hazardous substance and arranges by contract, agreement or otherwise for the disposal, treatment or transport for disposal or treatment of the hazardous substance.

(3) The person accepts hazardous substances for transport to disposal or treatment facilities, incineration vessels or sites selected by such person from which there is a release or a threatened release of a hazardous substance which causes the incurrence of response costs.

35 PA. STAT. § 6020.701(a).

COL 14. A responsible person is subject to strict liability under section 6020.702(a), which provides:

§ 6020.702. Scope of liability

(a) General rule.—A person who is responsible for a release or threatened release of a hazardous substance from a site as specified in section 701 is strictly liable for the following response costs and damages which result from the release or threatened release or to which the release or threatened release significantly contributes:

- (1) Costs of interim response which are reasonable in light of the information available to the department at the time the interim response action was taken.
- (2) Reasonable and necessary or appropriate costs of remedial response incurred by the United States, the Commonwealth or a political subdivision.
- (3) Other reasonable and necessary or appropriate costs of response incurred by any other person.
- (4) Damages for injury to, destruction of or loss of natural resources within this Commonwealth or belonging to, managed by, controlled by or appertaining to the United States, the Commonwealth or a political subdivision. This paragraph includes the reasonable costs of assessing injury, destruction or loss resulting from such a release.

(5) The cost of a health assessment or health effects study.

35 PA. STAT. § 6020.702(a).

COL 15. This court previously held that Greenlease “is responsible for a release or threatened release of a hazardous substance from a [the North Plant].” (ECF No. 240 at 26 (citing 35 PA. STAT. § 6020.702(a); ECF No. 224 ¶¶ 14-15.) When construed in isolation, sections 6020.702(a) and 6020.1101 would appear to render Greenlease strictly liable for *all* resulting response costs. 35 PA. STAT. §§ 6020.702(a), 6020.1101.

COL 16. The provisions of the HSCA, however, are generally construed to be coterminous with the parallel provisions of the CERCLA. Trinity Industries, Inc. v. Chicago Bridge & Iron Co., 735 F.3d 131, 136-38 (3d Cir. 2013);¹⁵ Agere Sys., 602 F.3d at 236. This court in its opinion dated August 5, 2014, granted summary judgment in favor of Greenlease and dismissed the Trinity plaintiffs’ claim asserted under § 9607(a)(4)(B) of the CERCLA, which is coterminous to sections 6020.701 and 6020.702 of the HSCA. (ECF No. 240 at 11-12.)

COL 17. In United States v. Atlantic Research Corporation, 551 U.S. 128, 138-39 (2007), the United States Supreme Court observed that a responsible party defending a claim under § 9607(a) of the CERCLA “could blunt any inequitable distribution of costs” by filing a counterclaim under § 9613(f) of the CERCLA. Atlantic Research, 551 U.S. at 140. As a settling party, however, the Trinity plaintiffs¹⁶ cannot be held liable “for contribution regarding matters

¹⁵ In Trinity Industries, Inc. v. Chicago Bridge & Iron Co., 735 F.3d 131, 136-38 (3d Cir. 2013), which involved the cleanup of the plaintiffs’ South Plant, the United States Court of Appeals for the Third Circuit held that the consent order at issue in this case constituted “an administrative or judicially approved settlement” resolving plaintiffs’ liability to Pennsylvania “for some or all of a response action.”

¹⁶ The court in its opinion dated August 5, 2014, explained:

addressed in the settlement.” 35 PA. STAT. § 6020.705(c)(2). The consent order broadly preserves the Trinity plaintiffs’ “protection from claims for contribution.” (Trinity pls. Ex. 1 ¶ 39.) The “matters addressed in the settlement” include all response actions taken (and response costs incurred) at the North and South Plants. (*Id.*) The Trinity plaintiffs, therefore, must pursue contribution claims under section 6020.705(c)(2), rather than seek to hold Greenlease jointly and severally liable under sections 6020.701, 6020.702, and 6020.1101. *Agere Sys.*, 602 F.3d at 228-29.

COL 18. Based upon the foregoing, the Trinity plaintiffs in this case are entitled to seek contribution from Greenlease under § 9613(f)(3)(B) of the CERCLA and section 6020.705(c)(2) of the HSCA. The Trinity plaintiffs are not entitled to recovery from Greenlease under sections 701, 702, and 1101 of the HSCA.

Burden of Proof

COL 19. The parties disagree about the burden of proof for allocation in a contribution action under the CERCLA and the HSCA. (See ECF No. 348 at 3; ECF No. 354 at 9.)

Unlike Trinity, TIRC is not specifically named as a party to the consent order. (ECF No. 146-1 at 1). In *Chicago Bridge*, the court of appeals did not distinguish between Trinity and TIRC. *Chicago Bridge*, 735 F.3d at 133. Collectively referring to plaintiffs as “Trinity,” the court of appeals treated them both as settling parties. *Id.* at 133, 136-38. The parties to this case identified no distinction between the status of Trinity and the status of TIRC. As far as the court can tell, TIRC would likewise enjoy statutory protection from counterclaims for contribution. 35 PA. STAT. § 6020.705(c)(2). If that is the case, TIRC cannot hold Greenlease jointly and severally liable under the remaining provisions of the HSCA. *Agere Systems*, 602 F.3d at 228-29.

(ECF No. 240 at 27.)

COL 20. Greenlease cites decisions interpreting the CERCLA in which the courts held that the party seeking contribution under the CERCLA bears the burden of proof on *all* elements in the case, including equitable allocation. (ECF No. 348 at 3 (citing e.g. N.J. Turnpike Auth., 197 F.3d at 104; Degussa Constr. Chem. Operations, Inc. v. Berwind Corp., 280 F.Supp.2d 393, 401 (E.D. Pa. 2003).)

COL 21. The Trinity plaintiffs cite the applicable provision of the HSCA, which provides, among other things, that “[t]he burden is on each party to show how liability should be allocated.” (ECF No. 354 at 9 (quoting 35 PA. CONS. STAT. § 6020.705(b).)

COL 22. The distinction drawn by the parties in this case is one without a difference. The same burden of proof with respect to allocation applies under either the CERCLA or the HSCA; indeed—as discussed above—the Third Circuit Court of Appeals has held that the “cost recovery and contribution provisions” contained in the HSCA to be “virtually identical” to those contained in the CERCLA. Agere Sys., 602 F.3d at 227-29.

COL 23. The parties in this case did not present to this court any basis on which to treat differently the CERCLA and the HSCA with respect to the applicable burdens of proof for equitable allocation.

COL 24. Greenlease is correct that under CERCLA the Trinity plaintiffs bear the burden of proving by a preponderance of the evidence that Greenlease is liable under CERCLA and a factual basis upon which to allocate equitably the costs incurred. Agere Sys., 602 F.3d at 232 (“The plaintiffs concede, as they must, that it was their burden to prove each party's ‘fair share’ or ‘size of the pie.’”); Kalamazoo River Study Grp. v. Rockwell Int'l Corp., 355 F.3d 574, 589-90 (6th Cir. 2004) (“CERCLA contribution plaintiffs must prove that they are entitled to reimbursement by a preponderance of the evidence.”); Elementis Chromium L.P. v. Coastal

States Petroleum Co., 450 F.3d 607, 612 (5th Cir. 2006) (“It is El Paso, as the party bringing an action for contribution, that bore ‘the burden of proving the defendant is a responsible party under § 107(a) of CERCLA and also the burden of proving the defendant’s equitable share of costs.’”) (quoting Centerior Serv. Co. v. Acme Scrap Iron & Metal Corp., 153 F.3d 344, 348 (6th Cir. 1998)); Goodrich Corp. v. Town of Middlebury, 311 F.3d 154, 168 (2d Cir. 2002) (Thus, the statute envisions a two-part inquiry: First, the court must determine whether the defendant is “liable” under CERCLA § 107(a); Second, the court must allocate response costs among liable parties in an equitable manner....The party seeking contribution bears the burden of proof at both prongs of the court’s inquiry.”); Minyard Enters., Inc. v. Se. Chem. & Solvent Co., 184 F.3d 373, 385 (4th Cir. 1999) (“Notably, under § 113(f) of CERCLA, the Plaintiff bears the burden of proving the defendant is a responsible party under § 107(a) of CERCLA and also the burden of proving the defendant’s equitable share of costs.”); Litgo N.J., Inc. v. Martin, Civ. Action No. 06-2891, 2012 WL 32200, at *9-10 (D.N.J. Jan. 5, 2012) (applying the preponderance of the evidence standard to its findings of fact with respect to equitable allocation of response costs under the CERCLA); Champion Labs., Inc. v. Metax Corp., Civ. Action No. 02-5284, 2009 WL 2496888, at *18 (D.N.J. Aug. 13, 2009) (applying the preponderance of the evidence standard to findings of fact with respect to the equitable allocation of response costs under the CERCLA).

COL 25. The Trinity plaintiffs are also correct that under the HSCA each party has the burden to prove that the court should adopt its allocation. 35 PA. CONS. STAT. ¶ 6020.705(b).

COL 26. The court in Yankee Gas Services Co. v. UGI Utilities, Inc., 852 F.Supp.2d 229 (D.Conn. 2012), explained:

[I]t is unclear what it would mean for a party to have the burden of proof as to allocation generally. A party can offer reasons favoring one allocation over another, and those may or may not convince the court. **Certainly a party has a**

burden of proving any fact which it wants the court to rely upon in deciding what is equitable. But if the court does not agree to the allocation proposed by the party bringing the § 113(f) counterclaim, the Court certainly needn't then default to the other party's proposed allocation instead. Rather than worrying about burdens of proof, liable parties simply need to present their best evidence and arguments as to what allocation proves most equitable.

Yankee Gas, 852 F.Supp.2d at 242 (emphasis added).

COL 27. The Trinity plaintiffs have the burden of proving by a preponderance of the evidence any fact which they want the court to rely upon in deciding what is equitable in this case. Yankee Gas, 852 F.Supp.2d at 242.

COL 28. Generally, Greenlease—as the defendant in this case—would not have the burden to prove any fact. Greenlease, however,—through Gerritsen—proposes two allocations, which it argues the court should adopt. Greenlease must, therefore, prove any fact upon which it basis those allocations by a preponderance of the evidence. Yankee, 852 F.Supp.2d at 242.

COL 29. Greenlease may also present evidence to this court to discredit the evidence presented by the Trinity plaintiffs. The Trinity plaintiffs—as the party bringing the contribution action—have the ultimate burden of proof in this case, i.e., the court will not allocate responsibility for response costs to Greenlease unless the Trinity plaintiffs prove by a preponderance of the evidence the facts upon which their allocation of response costs to Greenlease is based.

COL 30. As the court noted in Yankee Gas, the court is not required to wholesale accept any proposed allocation presented by the parties in this case; rather, the court will equitably allocate responsibility for the response costs incurred by the Trinity plaintiffs with respect to the North Plant based upon facts proven by a preponderance of the evidence. Yankee

Gas, 852 F.Supp.2d at 242; Litgo, 2012 WL 32200, at *9-10; Champion Labs., 2009 WL 2496888, at *18.

Orphan Shares

COL 31. The Trinity plaintiffs argue that any share of responsibility for the contaminants at the North Plant attributable to Shelby Steel is subject to equitable allocation as an “orphan share.” (ECF No. 354 ¶ 27 (citing Action Mfg. Co., Inc. v. Simon Wrecking Co., 428 F.Supp.2d 288, 328 (E.D. Pa. 2006).)

COL 32. The Trinity plaintiffs are correct that courts have held that orphan shares may be subject to equitable allocation. Litgo N.J. Inc. v. Comm'n N.J. Dep't of Envtl. Prot., 725 F.3d. 369, 379 n.4 (3d Cir. 2013) (“A court may equitably allocate orphan shares among liable parties at its discretion.”); Action Mfg., 428 F.Supp.2d at 325, 327; Kramer, 952 F.Supp. 592, 598 (D.N.J. 1997); United States v. Atlas Minerals and Chems., Inc., Civ. Action No. 1995 WL 510304, at *75 (E.D. Pa. Aug. 22, 1995).

COL 33. An orphan share is a “share of waste” attributable “to unknown or insolvent PRPs,” Action Mfg., 428 F.Supp.2d at 325, 327, or a PRP that is immune from suit. Litgo, 725 F.3d. at 379 n.4.

COL 34. The evidence in this case does not show that it is more likely than not that shares of waste attributable to Shelby Steel or Marstellar and Commerce Park are orphan shares because the evidence is insufficient to show by a preponderance of the evidence that any of those parties are unknown, insolvent, or otherwise immune from suit. Specifically, Shelby Steel is affiliated with United States Steel Corporation. (See FOF 4.)

COL 35. As discussed above, the Trinity plaintiffs have the burden of proof to show by a preponderance of the evidence any fact on which they rely for allocating response costs in this case.

COL 36. The Trinity plaintiffs did not join Shelby Steel or Marstellar and Commerce Park as defendants in this litigation in order to hold them liable for their share of the response costs incurred during the cleanup of the North Plant; rather, the Trinity plaintiffs seek to allocate nearly all response costs incurred during the cleanup of the North Plant to Greenlease even if Greenlease did not cause the contamination that caused those response costs.

COL 37. Under those circumstances, i.e., the Trinity plaintiffs having the ultimate burden of proof, their failure to prove there are orphan shares in this case, and their failure to join in this case parties that are more likely than not responsible for causing contamination at the North Plant, the court—as a matter of equity—will not allocate to Greenlease the costs incurred during the cleanup as a result of contamination that was not caused by Greenlease.

The Trinity Plaintiffs' Attack of Gerritsen

COL 38. The Trinity plaintiffs in their proposed findings of fact and conclusions of law argue that “Gerritsen had no basis to establish a limitation of 2.8 acres as the only geographic area for which Greenlease is responsible for contaminated fill.” (ECF No. 347 ¶ 309.) The Trinity plaintiffs explain: “[h]e provided no calculations justifying such an opinion, did not test this theory, determine any rate of error concerning it, or establish the methodology he used would be reasonable acceptable in his professional community.” (Id. ¶ 310.)

COL 39. The Trinity plaintiffs also argue that Gerritsen's "attribution of responsibility to Trintiy for fill material does not satisfy *Daubert* requirements, because they do not fit with any of the facts of this case."¹⁷ (ECF No. 347 ¶ 311.)

COL 40. The Trinity plaintiffs raised these issues in their motion to strike Greenlease's proposed expert testimony, brief in support of that motion, and on April 13, 2015, at the hearing held with respect to that motion. (ECF Nos. 272, 273; H.T. 4/13/15 (ECF No. 325) at 29-34.)

COL 41. The court on the record at the hearing held on April 13, 2015, denied the Trinity's plaintiffs' motion and held that counsel for the Trinity plaintiffs could cross-examine Gerritsen on the points raised by the Trinity plaintiffs, but those points were not a basis upon which to preclude Gerritsen's testimony because he explained his methodology and had the expertise to express such opinions. (H.T. 4/13/15 (ECF No. 325) at 32-33.)

COL 42. Because the Trinity plaintiffs previously raised these issues and the court addressed them on the record at the hearing held on April 13, 2015, their arguments with respect to Gerritsen in their proposed findings of fact and conclusions of law are in essence a motion for reconsideration. The Trinity plaintiffs, however, did not set forth a basis¹⁸ upon which the court shall reconsider its previous holding with respect to Gerritsen's testimony.¹⁹

¹⁷ Gerritsen did not opine that the Trinity plaintiffs placed historic fill at the North Plant; rather, his opinion is that the Trinity plaintiffs should be allocated responsibility for response costs that are not attributable specifically to Greenlease, i.e., response costs attributable to the Trinity plaintiffs or a third party. (T.T. 4/27/15 (ECF No. 344) at 10; T.T. 4/24/15 (ECF No. 343) at 126.)

¹⁸ The purpose of a motion to reconsider is "to correct manifest errors of law or fact or to present newly discovered evidence." Bootay v. KBR, Inc., 437 F.App'x 140, 146-47 (3d Cir. 2011) (citing Harsco Corp. v. Zlotnicki, 779 F.2d 906, 909 (3d Cir.1985)). In order to be

Costs to be Allocated

successful on a motion for reconsideration, the movant must demonstrate a “definite and firm conviction that a mistake has been committed,” or that the court overlooked arguments that were previously made. United States v. Jaslin, 292 F.Supp.2d 670, 676 (E.D. Pa. 2003). There are three circumstances in which a court may grant a motion for reconsideration: (a) there has been an intervening change in the law; (b) new evidence is now available that was not available when the court entered judgment; or (c) there is a need to correct a clear error of law or fact, or to prevent manifest injustice. FED. R. CIV. P. 59(e); Allah v. Ricci, 532 F.App'x 48, 51 (3d Cir. 2013) (citing Lazaridis v. Wehmer, 591 F.3d 666, 669 (3d Cir.2010)); Max's Seafood Café v. Quinteros, 176 F.3d 669, 677 (3d Cir. 1999) (citing N. River Ins. Co. v. CIGNA Reinsurance Co., 52 F.3d 1194, 1218 (3d Cir.1995)). By reason of the interest in finality, at least at the district court level, motions for reconsideration should be sparingly granted. Rottmund v. Cont'l Assurance Co., 813 F.Supp. 1104, 1107 (E.D. Pa. 1992).

Motions for reconsideration are not designed to provide litigants with a “second bite at the apple.” Bhatnagar v. Surrendra Overseas Ltd., 52 F.3d 1220, 1231 (3d Cir. 1995). A motion for reconsideration is not to be used to relitigate, or “rehash,” issues the court already decided, or to ask a district court to rethink a decision it, rightly or wrongly, already made. Williams v. City of Pittsburgh, 32 F.Supp.2d 236, 238 (W.D. Pa. 1998); Keyes v. Nat'l R.R. Passenger Corp., 766 F.Supp. 277, 280 (E.D. Pa. 1991). A motion for reconsideration is not to be used as a way to advance additional arguments that the litigant could have made, but chose not to make, sooner, or as an opportunity for a litigant, having lost, to change theories of the case and advance new, often contradictory, evidence in support. Bell v. City of Phila., 275 F.App'x 157, 160 (3d Cir. 2008); Spence v. City of Phila., 147 F .App'x 289, 291–92 (3d Cir. 2005); Bhatnagar, 52 F.3d at 1231; Trenton v. Scott Paper Co., 832 F.2d 806, 810 (3d Cir.1987); Miller v. Court of Common Pleas of Erie Cnty., Civ. Action No. 12–206, 2014 WL 108585, at *2 (W.D. Pa. Jan. 10, 2014).

¹⁹ To the extent the Trinity plaintiffs did not set forth the arguments about Gerritsen’s expert testimony prior to the bench trial or during the bench trial, they may have waived their right to object to Gerritsen’s testimony, which was in accord with his expert reports produced to the Trinity plaintiffs. Wright v. City of Phila., Civ. Action No. 01-6160, 2007 WL 951421, *2 (E.D. Pa. Mar. 27, 2007) (“The City cannot challenge Professor Anderson’s expert testimony in its renewed motion for judgment as a matter of law, when it did not object to this testimony before filing its post-trial motion.”); Kiss v. Kmart Corp., Civ. Action No. 97-7090, 2001 WL 568974, at *6 (E.D. Pa. May 22, 2001) (“Plaintiff did not object at trial to the testimony of which she now complains; therefore, Plaintiff has waived the objection. Plaintiff’s pretrial objection described above is insufficient to preserve the issue.”).

COL 43. Response costs recoverable in this case must be consistent with the consent order, i.e., they must be reasonable and necessary. (ECF No. 240 at 13-19 (citing 42 U.S.C. § 9613(f)(3)(B); 35 PA. CONS. STAT. § 6020.702; Agere Sys., 602 F.3d at 236.)

COL 44. Greenlease sets forth three main arguments about costs allegedly incurred by the Trinity plaintiffs in this case: (a) the Trinity plaintiffs incurred unnecessary costs as a result of Golder's erroneous use of a standard action level during the cleanup of the North Plant; (b) the Trinity plaintiffs did not in accordance with Federal Rule of Civil Procedure 26(a) properly disclose all costs that it sought at trial; and (c) the Trinity plaintiffs did not prove the accuracy of any costs. Greenlease argues that the court under those circumstances should not permit the Trinity plaintiffs to recover unnecessary costs, costs that were not properly disclosed via Gormley's expert reports, and costs for which the Trinity plaintiffs did not prove their accuracy. The first argument will be addressed and the second and third arguments will be addressed together.

Necessary Costs

COL 45. With respect to Greenlease's argument that Golder's TCLP testing was unreliable, the PaDEP oversaw Golder's remedial investigation and cleanup of the North Plant. Impact areas 1 and 10, in which the TCLP testing was performed, represent two of the largest impact areas identified by Golder. (Trinity pls. Ex. 16 at TRINGRNL070577.) The Trinity plaintiffs showed that the TCLP testing performed by Golder was reliable and did not result in unnecessary costs.

COL 46. Greenlease's arguments that Golder's use of a standard action level and initial use of a standard action level of 1,000 parts per million caused the Trinity plaintiffs to incur unnecessary costs is not persuasive.

COL 47. First, the Trinity plaintiffs met their burden to show by a preponderance of the evidence that the costs it incurred were reasonable and necessary because (a) Golder selected the 1,000 milligrams of lead per kilogram of soil-standard in light of concerns about the soils that failed the TCLP testing and (b) that standard action level complied with the detailed remedial investigation and work plans submitted by Golder to the PaDEP, which the PaDEP approved, pursuant to the consent order. In other words, the PaDEP approved the use of a standard action level, and, more specifically, Golder's use of a standard action level of 1,000 parts per million and a modified standard action level of 2,500 parts per million.

COL 48. Second, a Subtitle C cap, which has an appearance of a landfill, would have been required atop the areas of the North Plant that contained hazardous waste and significant parts of the North Plant would have been taken out of any potential for reuse unless Golder excavated the soils that constituted hazardous waste and transported them to a Subtitle C landfill. (See FOF 186, 219.) A Subtitle C cap at the North Plant would not be consistent with the surrounding area of the North Plant, which is residential in nature. (See FOF 221.)

COL 49. Third, a Subtitle C cap is "significantly more expensive" to install and maintain as opposed to the asphalt caps used at the North Plant. (T.T. 4/23/15 (ECF No. 342) at 14-15.)

COL 50. Under those circumstances, the court is not persuaded that Golder's use of a standard action level in this case resulted in unnecessary or unreasonable costs²⁰ or that the Trinity plaintiffs incurred costs that were not consistent with the consent order.

²⁰ The cost of a response action, furthermore, is only one of nine criteria against which Greenlease's remedial alternative should be weighed. 40 C.F.R. § 300.430(e)(9)(iii). The nine factors that must be considered are: "1. Overall protection of human health and the environment; 2. Compliance with applicable or relevant and appropriate requirements (ARARs); 3. Long-term

The Trinity plaintiffs' Disclosure of Response Costs and the Accuracy of the Response Costs

COL 51. In a motion in limine filed pursuant to Federal Rule of Civil Procedure 26(a), Greenlease sought to preclude the testimony of Gormley with respect to six cost categories that were not identified in his updated expert report dated December 2014. (ECF No. 292.)

COL 52. Gormley in his updated expert report dated December 2014 identified in a section entitled “RESPONSE ACTION COSTS” three categories of response costs: (a) site cleanup; (b) environmental monitoring and engineering support; and (c) operations and maintenance. (Gormley’s Updated Expert Report dated December 2014 at 29-30.)

COL 53. During Gormley’s deposition on January 29, 2015, he identified six additional categories of costs about which he intended to render an opinion, i.e., investigation work plans, investigations, development of a cleanup work plan, development of a cleanup plan, obtaining permits associated with construction, and litigation support. (ECF No. 266-2 at 244.)

COL 54. In the Trinity plaintiffs’ pretrial statement, the Trinity plaintiffs listed the three categories of costs identified in Gormley’s updated expert report dated December 2014 and four additional categories of costs, i.e., remedial and post-remedial investigation, legal representation, reimbursement to the PaDEP, and costs related to the cleanup of the South Plant ballfield. (ECF No. 284 at 8-10.)

effectiveness and permanence; 4. Reduction of toxicity, mobility or volume through treatment; 5. Short-term effectiveness; 6. Implementability; 7. Cost; 8. State Acceptance; and 9. Community acceptance.” Andritz Sprout-Bauer, Inc. v. Beazer E., Inc., 174 F.R.D. 609, 631 (M.D. Pa. 1997) (citing 40 C.F.R. § 300.430(e)(9)(iii)(A)—(I)).

COL 55. According to Greenlease, permitting Gormley to testify about the four additional cost categories that were not contained in his updated expert report dated December 2014 would violate Rule 26(a)(2)(B)(i), and the appropriate sanction for the Trinity plaintiffs' failure to disclose that information to Greenlease prior to the eve of trial would be to prohibit Gormley from offering testimony about those cost categories at trial. (ECF No. 267 at 4.)

COL 56. The Trinity plaintiffs responded that they complied with Rule 26 because they provided to Greenlease their invoices for all costs incurred at the North Plant. (T.T. 4/20/15 (ECF No. 325) at 9.) Counsel for the Trinity plaintiffs explained:

Each invoice has a line item and a code for every entry that we got that says things like sampling and the like. Each one has the current month, and then it has – I think it's year-to-date and then project to date. At the bottom of each invoice is the total amount that's running for each coded line item.

(Id.) There were “800 or 900” pages of invoices provided to Greenlease. (Id. at 9-10.) According to the Trinity plaintiffs, Greenlease had sufficient notice with respect to the four additional categories of response costs and the additional four categories of responses costs were included in Gormley’s updated expert report dated December 2014. (ECF No. 347 at 62-66.)

COL 57. Counsel for the Trinity plaintiffs first represented to the court that the invoices produced to Greenlease reflected only the response costs that they were entitled to seek from Greenlease in this case. (T.T. 4/20/15 (ECF No. 325) at 10.)

COL 58. Counsel for Greenlease pointed out, however, that the invoices contained charges to the Trinity plaintiffs for Gormley preparing his expert report, which is a cost category that is not recoverable in this case. (T.T. 4/20/15 (ECF No. 325) at 12.)

COL 59. Counsel for the Trinity plaintiffs advised the court that it would reexamine the invoices and exclude any litigation costs from the invoices. (T.T. 4/20/15 (ECF No. 325) at

13.) The Trinity then produced to the court and Greenlease a “Summary of Golder Past Costs Through February 2015,” which summarized the invoices it produced to Greenlease, i.e., provided subtotals for the different categories of work done by Golder to remediate the North Plant, and set forth the total response costs they incurred remediating the North Plant, i.e., \$8,993,430.81. (Trinity pls. Ex. 80.)

COL 60. On cross-examination of Lencioni at trial, counsel for Greenlease pointed out a variety of charges on the invoices that were for litigation costs or costs associated with the South Plant, which is not in issue in this case. The Trinity plaintiffs at the close of the cross-examination withdrew their claim for attorneys’ fees. (T.T. 4/27/15 (ECF No. 344) at 141.)

COL 61. Greenlease maintains that it “would be severely prejudiced if the Court permitted Trinity to recover categories of costs that Trinity did not disclose in its expert report.” (ECF No. 346 at 39.)

COL 62. Rule 26(a) provides:

(A) *In General.* Except as exempted by Rule 26(a)(1)(B) or as otherwise stipulated or ordered by the court, a party must, without awaiting a discovery request, provide to the other parties:

...

(iii) a computation of each category of damages claimed by the disclosing party--who must also make available for inspection and copying as under Rule 34 the documents or other evidentiary material, unless privileged or protected from disclosure, on which each computation is based, including materials bearing on the nature and extent of injuries suffered;

FED. R. CIV. P. 26(a)(1)(A)(iii).

COL 63. Rule 26(a)(2)(B) provides:

(B) **Witnesses Who Must Provide a Written Report.** Unless otherwise stipulated or ordered by the court, this disclosure must be accompanied by a written report--prepared and signed by the witness--if the witness is one

retained or specially employed to provide expert testimony in the case or one whose duties as the party's employee regularly involve giving expert testimony. The report must contain:

- (i) a complete statement of all opinions the witness will express and the basis and reasons for them;
- (ii) the facts or data considered by the witness in forming them;
- (iii) any exhibits that will be used to summarize or support them;
- (iv) the witness's qualifications, including a list of all publications authored in the previous 10 years;
- (v) a list of all other cases in which, during the previous 4 years, the witness testified as an expert at trial or by deposition; and
- (vi) a statement of the compensation to be paid for the study and testimony in the case.

FED. R. CIV. P. 26(a)(2)(B).

COL 64. The purpose of the requirement to disclose expert reports in advance of trial is to provide the opposing party with a “reasonable opportunity to prepare for effective cross examination and perhaps arrange for expert testimony from other witnesses.” FED. R. CIV. P. 26(a)(2) advisory committee’s notes to 1993 amendment.

COL 65. Federal Rule of Civil Procedure 37(c) provides:

- (1) Failure to Disclose or Supplement. If a party fails to provide information or identify a witness as required by Rule 26(a) or (e), the party is not allowed to use that information or witness to supply evidence on a motion, at a hearing, or at a trial, unless the failure was substantially justified or is harmless.

FED. R. CIV. P. 37(c).

COL 66. “[T]he party who fails to disclose bears the burden to show that its actions were substantially justified or harmless.” Schmidt v. Mars, Inc., Civ. Action No. 09-3008, 2012 WL 1191260, at *1 (D.N.J. April 10, 2012).

COL 67. To determine whether the exclusion of evidence is an appropriate sanction for failing to comply with discovery rules, the court must consider:

(1) the prejudice or surprise of the party against whom the excluded evidence would have been admitted; (2) the ability of the party to cure that prejudice; (3) the extent to which allowing the evidence would disrupt the orderly and efficient trial of the case or other cases in the court; and (4) bad faith or wilfulness in failing to comply with a court order or discovery obligation.

Nicholas v. Pa. State Univ., 227 F.3d 133, 148 (3d Cir. 2000).

COL 68. It is unnecessary for the court to conduct the foregoing analysis with three of the four additional cost categories of which Greenlease complains, i.e., costs related to legal representation, costs related to the cleanup of the South Plant ballfield, and costs related to the reimbursement of the PaDEP.

COL 69. The Trinity plaintiffs at trial withdrew their claim for response costs associated to legal representation. (T.T. 4/27/15 (ECF No. 344) at 141.)

COL 70. As discussed above, the Trinity plaintiffs cannot obtain contribution from Greenlease for the costs related to the cleanup of the South Plant ballfield because based upon the evidence of record Greenlease is not a PRP with respect to the South Plant.

COL 71. With respect to the cost category for the Trinity plaintiffs' reimbursement to the PaDEP, the Trinity plaintiffs did not present evidence sufficient at the time of trial for the court to determine the extent to which PaDEP's investigative costs related to the North Plant as opposed to the South Plant.

COL 72. As discussed above, Greenlease is not a PRP with respect to the South Plant. The sentence imposed upon Trinity Industries, Inc. and the consent order it entered into with the PaDEP, however, concerned the cleanup of both the South Plant and the North Plant.

(Trinity pls. Ex. 1 ¶¶ C, D; Greenlease Ex. M (“The defendant is further ORDERED to remediate all environmental contamination at the Trinity North and South plants[.]”)

COL 73. The Trinity plaintiffs at trial did not present any expert or lay testimony with respect to the portion of reimbursement costs associated with the investigation of the South Plant or the portion of the reimbursement costs related to the North Plant. The Trinity plaintiffs, therefore, cannot seek contribution from Greenlease for the costs associated with reimbursing the PaDEP for the PaDEP’s investigation because the court lacks sufficient evidence to determine how much of that cost may be attributable to Greenlease with respect to the North Plant.

COL 74. With respect to costs associated with the Trinity plaintiffs’ remedial and post-remedial investigation of the North Plant, the Trinity plaintiffs in the complaint sought “response costs under CERCLA,” which included “costs of investigation.” (ECF No. 1 at 9, 15, 17, 18.)

COL 75. The consent order, which Greenlease relied upon in its motion for summary judgment, defined “Response Costs” as, among other things, “costs of investigation.” (Trinity pls. Ex. 1 ¶ 3(h); ECF Nos. 143-45.)

COL 76. The consent order, which Greenlease relied upon in its motion for summary judgment, defined “Response Costs” as, among other things, “costs of investigation.” (Trinity pls. Ex. 1 ¶ 3(h); ECF Nos. 143-45.)

COL 77. The Trinity plaintiffs provided to Greenlease approximately 800 to 900 pages of invoices with respect to the costs they incurred in relation to, among other things, the cleanup of the North Plant, including the remedial investigation and post-remedial conduct at the North Plant. (H.T. 4/13/15 (ECF No. 325) at 9-12; ECF Nos. 280-4, 280-5, 280-6.) According to counsel for the Trinity plaintiffs:

There are three types of invoices, all of which have been provided to Greenlease, and they're chronological. The first ones go to the time period that were called the remedial investigation report. There then were activities post remedial investigation report but preconstruction, and then there are construction.

Each invoice has a line item and a code for every entry that we got that says things like sampling and the like. Each one has the current month, and then it has – I think it's year-to-date and then project to date. At the bottom of each invoice is the total amount that's running for each coded line item.

(H.T. 4/13/15 (ECF No. 325) at 9.)

COL 78. On March 19, 2009, the Trinity plaintiffs provided to Greenlease a "Rule 26(a)(1)(A)(iii) 'Computation of Damages,'" which provided:

To date, Plaintiffs have incurred \$499,059.28 related to investigative, response, or remedial work at the subject property. Exhibits A, B, and C hereto reflect, respectively, documentation of costs incurred in 2007, 2008, and thus far in 2009. Investigative, response, or remedial work is ongoing at the property. Plaintiffs therefore reserve the right to supplement these disclosures as appropriate.

(ECF No. 280-1 at 1-2.)

COL 79. The Trinity plaintiffs provided to Greenlease a supplemental Rule 26(a)(1)(A)(iii) disclosure dated May 21, 2009, which provided:

To date, Plaintiffs have incurred approximately \$500,783.91 related to investigative, response, or remedial work at the subject property. The documents Bates numbered Trin00001 through Trin00227, submitted with these disclosures, reflect costs incurred in 2007, 2008, and thus far in 2009. Investigative, response, or remedial work is ongoing at the property and any such future work is subject to the approval of PaDEP.

(ECF No. 280-2 at 9.)

COL 80. The Trinity plaintiffs provided to Greenlease a supplemental Rule 26(a)(1)(A) disclosure dated January 24, 2011, which provided that response costs totaled \$814,000, and "[i]nvestigative and response work is ongoing at the North Plant, and future remedial or removal work may be required at the site." (ECF No. 280-3 at 2.)

COL 81. During Gormley's deposition on January 29, 2015, he identified six additional categories of costs about which he intended to render an opinion, i.e., investigation work plans, investigations, development of a cleanup work plan, development of a cleanup plan, obtaining permits associated with construction, and litigation support. (ECF No. 266-2 at 244.)

COL 82. On March 20, 2015, the Trinity plaintiffs filed their pretrial statement, which provided, among other things:

North Plant Costs & Damages

- 1) \$2,742,649.01 – Approximate costs incurred to date for “remedial investigation” and “post-remedial investigation” work at the North Plant to identify and define contaminants impacting the property. This amount is calculated based on work performed and actually invoiced to Trinity Industries, Inc. by its environmental consultant, Golder Associates, Inc. The amount will be proven through invoices, as well as documentation and testimony that the costs have been paid.

(ECF No. 284 at 8.)

COL 83. On April 6, 2015, Greenlease in a motion to strike damages identified in plaintiffs' pretrial statement first raised with the court the issue with respect to the “additional” categories of costs it alleges were first disclosed in the pretrial statement one month prior to the commencement of trial. (ECF No. 292.)

COL 84. Based upon the record before the court, with respect to the “remedial investigation and post-remedial investigation” costs the Trinity plaintiffs sought at trial, the Trinity plaintiffs complied with Rule 26(a)(1)(A)(iii), which required them to produce to Greenlease “a computation of each category of damages claimed by the disclosing party.” FED. R. CIV. P. 26(a)(1)(A)(iii).

COL 85. The Trinity plaintiffs provided to Greenlease throughout this litigation Rule 26(a)(1)(A)(iii) reports, which provided a computation of the *total* “response costs” the

Trinity plaintiffs had incurred to date at the North Plant. (ECF Nos. 280-1, 280-1, 280-3.) Those reports did not contain a computation of *each* category of damages that the Trinity plaintiffs sought at trial and listed in their pretrial statement.

COL 86. The invoices provided to Greenlease, however, contained a computation of the costs paid by the Trinity plaintiffs with respect to the remedial investigation and post-remedial investigation. (H.T. 4/13/15 (ECF No. 325) at 9; Trinity pls. Exs. 74-75.)

COL 87. The court concludes, therefore, that the Trinity plaintiffs satisfied their obligations under Rule 26(a)(1)(A)(iii).

COL 88. Greenlease argues that the remedial investigation and post-remedial investigation costs should have been disclosed in Gormley's expert report, i.e., Gormley was required to provide testimony about the additional cost categories for them to be recoverable in this case. Greenlease does not cite any authority in support of its argument, and at least one court has held that "there is nothing to suggest that expert testimony is required to address the issue of response costs." Maine v. Kerramerican, 480 F.Supp.2d 375, 378-79 (D. Maine 2007).

COL 89. The court must assess in this case whether the costs sought by the Trinity plaintiffs are consistent with the consent order, i.e., whether they are reasonable and necessary. 42 U.S.C. § 9613(f)(3)(B); 35 PA. CONS. STAT. § 6020.702; Agere Sys., 602 F.3d at 236 ("Indeed, the cost recovery and contribution provisions in HSCA are virtually identical to those in CERCLA."); (ECF No. 240 at 13-19).

COL 90. The consent order is an exhibit in this case. (Trinity pls. Ex. 1.)

COL 91. Gormley described the remedial investigation and post-remedial investigation activities Golder performed, pursuant to the consent order. Gormley did not opine on the total costs of the remedial investigation or post-remedial investigation; rather, Lencioni

testified about the costs incurred by the Trinity plaintiffs as a result of Golder's cleanup of the North Plant, and the Trinity plaintiffs entered into evidence the invoices related to that work. (Trintiy pls. Exs. 74-76.) The Trinity plaintiffs also entered into evidence a "Summary of Golder Past Costs Through February 2015," which summarizes and provides a total for each of the three categories of invoices provided to Greenlease by the Trinity plaintiffs. (Trinity pls. Ex. 80.)

COL 92. Under those circumstances, the Trinity plaintiffs proved by a preponderance of the evidence that the remedial investigation and post-remedial investigation were conducted by Golder pursuant to the consent order, and, therefore, the costs incurred by the Trinity plaintiffs as a result of the remedial investigation and post-remedial investigation were consistent with the consent order, i.e., they were reasonable and necessary.

COL 93. Even if this court were to conclude that the Trinity plaintiffs violated Rule 26(a) by failing prior to filing its pretrial statement to disclose the cost category for "remedial investigation and post-remedial investigation," Greenlease should have known that the Trinity plaintiffs intended to seek contribution from Greenlease for the costs incurred as a result of the remedial investigation and post-remedial investigation of the North Plant because: (a) the consent order defined response costs; (b) the Trinity plaintiffs alleged in the complaint that they incurred and were seeking response costs with respect to their investigations of the North Plant; (c) the invoices for the remedial investigation and post-remedial investigations were disclosed to Greenlease; (d) the Trinity plaintiffs referred to those costs in their Rule 26(a)(1)(A)(iii) reports; and (e) Gormley testified that he intended to render an opinion about cost categories other than the cost categories set forth specifically in his report.

COL 94. Greenlease—based upon the foregoing sources—would have known that the Trinity plaintiffs were seeking response costs for the remedial investigation and post-remedial investigation.

COL 95. In other words, Greenlease could not have been surprised by the Trinity plaintiffs' pretrial statement in which it set forth the damages they are seeking for the remedial and post-remedial investigation. Nicholas, 227 F.3d at 148.

COL 96. To the extent Greenlease was *prejudiced* by the Trinity plaintiffs' alleged failure to disclose the cost category for the remedial investigation and post-remedial investigation, Greenlease should have promptly discussed with the Trinity plaintiffs' whether they were seeking response costs for the remedial investigation and post-remedial investigation or requested additional discovery from the court following Gormley's deposition on January 29, 2015, during which he identified six additional categories of costs, including investigations, that were not specifically identified as response costs in his updated expert report dated December 2014 and on which he intended to render an opinion.

COL 97. The court—in any event—kept the record for the bench trial open and permitted Greenlease to submit revised allocations based upon the information the Trinity plaintiffs' submitted to them on the eve of trial. (Greenlease Exs. Revised TTTT-WWWW.)

COL 98. Gormley did not testify about the specific costs incurred as a result of the remedial investigation and post-remedial investigation; rather, he explained actions taken by Golder pursuant to the consent order as part of the remedial investigation and post-remedial investigation, and the Trinity plaintiffs via Lencioni entered into evidence the invoices for the remedial investigation and post-remedial investigation. Under those circumstances, the court concludes that allowing the evidence with respect to the costs incurred as part of the remedial

investigation or post-remedial investigation did not disrupt the “orderly and efficient” bench trial in this case. Nicholas, 227 F.3d at 148.

COL 99. Lastly, the court cannot discern any factual basis upon which it could find that the Trinity plaintiffs acted in bad faith or willfully failed to comply with a court order or its Rule 26 obligations. Nicholas, 227 F.3d at 148.

COL 100. Based upon the foregoing, the Trinity plaintiffs complied with their Rule 26(a) obligations with respect to costs incurred for the remedial investigation and post-remedial investigation.

COL 101. The testimonies of Gormley and Lencioni and the invoices presented by the Trinity plaintiffs show that the costs incurred as a result of the remedial investigation and post-remedial were consistent with the consent order, i.e., they were reasonable and necessary to the cleanup of the North Plant. Greenlease’s argument and evidence to the contrary did not otherwise convince the court.

COL 102. The court must, therefore, allocate the response costs of \$8,993,430.81, which were incurred by the Trinity plaintiffs. (Trinity pls. Ex. 80.)

Equitable Allocation

COL 103. “Section 113(f) explicitly grants PRPs a right to contribution. Contribution is defined as the ‘tortfeasor’s right to collect from others responsible for the same tort after the tortfeasor has paid more than his or her proportionate share, the shares being determined as a percentage of fault.’” Atlantic Research, 551 U.S. at 138 (citing *Contribution*, Black’s Law Dictionary, (8th ed. 2004)).

COL 104. “The allocation of response costs in a § 113 contribution case is governed by CERCLA’s broad instruction that the court ‘may allocate response costs among liable parties

using such equitable factors as the court determines are appropriate.”” Action Mfg., 428 F.Supp.2d at 325 (quoting 42 U.S.C. § 9613(f)(1)).

COL 105. “The Third Circuit [Court of Appeals] and others have noted that the language of § 9613(f)(1) demonstrates Congress’s intent that trial courts exercise their discretion in determining what factors to consider.” Action Mfg., 428 F.Supp.2d at 324 (citing Beazer E., Inc. v. Mead Corp., 412 F.3d 429, 446 (3d Cir. 2005)).

COL 106. “[A] court may consider several factors or a few, depending on the totality of the circumstances and equitable considerations.”” Beazer, 412 F.3d at 441 (quoting N.J. Turnpike Auth., 97 F.3d at 104).

COL 107. To allocate the \$8,993,430.81 in response costs incurred by the Trinity plaintiffs during the cleanup of the North Plant, the court “must assess the relative responsibility” of the Trinity plaintiffs and Greenlease ““using such equitable factors as the court determines are appropriate.”” Action Mfg., 8 F.Supp.2d at 329 (quoting 42 U.S.C. § 9613(f)(1)).

COL 108. “There is no predetermined list of factors to be applied in determine the equitable allocation of response costs.” TDY Holdings, LLC v. United States, Civ. Action No. 07-787, 2015 WL 4979003, at *12 (S.D. Cal. July 29, 2015). “An unsuccessful CERCLA amendment proposed by then-Representative Al Gore (referred to since as the ‘Gore Factors’) is often cited as a non-exclusive list of appropriate considerations[.]” Action Mfg., 28 F.Supp.2d at 329. The Gore Factors are as follows:

- “(i) the ability of the parties to demonstrate that their contribution to a discharge, release or disposal of a hazardous waste can be distinguished;
- “(ii) the amount of the hazardous waste involved;
- “(iii) the degree of toxicity of the hazardous waste involved;

(iv) the degree of involvement by the parties in the generation, transportation, treatment, storage, or disposal of the hazardous waste;

(v) the degree of care exercised by the parties with respect to the hazardous waste concerned, taking into account the characteristics of such waste; and

(vi) the degree of cooperation by the parties with Federal, State, or local officials to prevent any harm to the public health or the environment.”

Id. (quoting 126 Cong. Rec. 26,779-81 (1980)).

COL 109. “Courts also often invoke the so-called ‘Torres Factors,’ named after the ‘critical factors’ enumerated by then-Judge Torres[.]” Lockheed Marton Corp. v. United States, 35 F.Supp.3d 92, 122 (D.D.C. 2014). The Torres Factors are:

- “1. The extent to which cleanup costs are attributable to wastes for which a party is responsible.
2. The party's level of culpability.
3. The degree to which the party benefitted from disposal of the waste.
4. The party's ability to pay its share of the cost.”

Id.²¹ (quoting United States v. Davis, 31 F.Supp.2d 45, 63 (D.R.I. 1998)).

Cause of Contamination

COL 110. A majority of the evidence presented at trial and the arguments of the parties concerned which party or other entity that is not a party in this case caused the

²¹ The court in Lockheed Martin explained:

Some scholars have argued that while “[t]he Gore factors are most relevant in academic and theoretical analysis of the way Superfund liabilities should be allocated in the real world Judge Torres' list of four critical factors often provides the basis upon which Superfund allocations are made.” Robert P. Dahlquist, *Making Sense of Superfund Allocation Decisions: The Rough Justice of Negotiated and Litigated Allocations*, 31 Envtl. L. Rep. 11098, 11099 (2001) (emphasis added); see also Yankee Gas, 852 F.Supp.2d at 247.

Lockheed Martin, 35 F.Supp.3d at 123 n.37.

contamination in the IAs identified by Golder at the North Plant. The most critical factor for the equitable allocation in this case is the extent to which each party is responsible for the contamination in each IA at the North Plant. This factor includes consideration whether there is a sound basis to distinguish the parties' contributions and the degree of involvement and care by the parties. The IAs will be grouped by the AOCs to which they relate.

AOC-N1

COL 111. With respect to the lead contamination IA 5, the Trinity plaintiffs did not satisfy their burden to show the response costs incurred for that IA should be allocated to Greenlease. (See FOF 285-99.)

COL 112. With respect to the SVOC contamination IA 18, the Trinity plaintiffs did not satisfy their burden to show the response costs incurred for that IA should be allocated to Greenlease. (See FOF 285-86, 300-01.)

COL 113. With respect to the VOC contamination in IAs 9a-9c, the Trinity plaintiffs satisfied their burden to show that 100% of the response costs incurred for those IAs should be allocated to Greenlease. (See FOF 285-86, 302-05.)

AOC-N4 and AOC-N5

COL 114. With respect to the lead contamination in IAs 1a, 1c, 1d, and 1f, the Trinity plaintiffs satisfied their burden to show that 100% of the response costs incurred for those IAs should be allocated to Greenlease. (See FOF 306-19.)

AOC-N6

COL 115. With respect to the lead contamination in IA 4b, the Trinity plaintiffs did not satisfy their burden to show that the response costs for that IA should be allocated to Greenlease. (See FOF 320-26.)

AOC-N8

COL 116. With respect to the lead contamination in IA 1e, the Trinity plaintiffs did not satisfy their burden to show that the response costs for that IA should be allocated to Greenlease. (See FOF 327-34.)

AOC-N9

COL 117. With respect to the lead contamination in IAs 4a, 8a, and 8d, the Trinity plaintiffs did not satisfy their burden to show that the response costs for those IAs should be allocated to Greenlease. (See FOF 335-42.)

COL 118. With respect to the VOC contamination in IAs 8b and 8c, the Trinity plaintiffs satisfied their burden to show 97% of the response costs for those IAs should be allocated to Greenlease and 3% of those response costs should be allocated to the Trinity plaintiffs. (See FOF 335-36, 343-48.)

AOC-N10

COL 119. With respect to the lead contamination in IA 19, the Trinity plaintiffs did not satisfy their burden to show that the response costs for that IA should be allocated to Greenlease. (See FOF 349-53.)

AOC-N11

COL 120. With respect to the lead contamination in IAs 3a-3c, the Trinity plaintiffs satisfied their burden to show that 100% of the response costs for those IAs should be allocated to Greenlease. (See FOF 354-59.)

AOC-N12

COL 121. With respect to the lead contamination in IAs 10a-10d and 11, the Trinity plaintiffs satisfied their burden to show that 50% of the response costs for those IAs should be allocated to Greenlease. (See FOF 360-72.)

AOC-N13

COL 122. With respect to the SVOC contamination in IA 16, the Trinity plaintiffs did not satisfy their burden to show that the response costs for that IA should be allocated to Greenlease. (See FOF 373-74.)

AOC-N14

COL 123. With respect to the lead contamination in IA 15, the Trinity plaintiffs did not meet their burden to show that the response costs for that IA should be allocated to Greenlease. (See FOF 375-81.)

AOC-N18

COL 124. With respect to the lead contamination in IAs 3a, 3c, and 3d, the Trinity plaintiffs satisfied their burden to show that 100% of the response costs for those IAs should be allocated to Greenlease. (See FOF 382-90.)

AOC-N19

COL 125. With respect to the lead contamination in IA 3c, the Trinity plaintiffs satisfied their burden to show that 100% of the response costs for that IA should be allocated to Greenlease. (See FOF 391-94.)

AOC-N20

COL 126. With respect to the lead contamination in IA 7, the Trinity plaintiffs satisfied their burden to show that 100% of the response costs for that IA should be allocated to Greenlease. (See FOF 395-403.)

AOC-N21

COL 127. With respect to the lead contamination in IA 1b, the Trinity plaintiffs satisfied their burden to show that 100% of the response costs for that IA should be allocated to Greenlease. (See FOF 404-13.)

AOC-N22

COL 128. With respect to the lead contamination in IAs 2a and 2b, the Trinity plaintiffs satisfied their burden to show that 100% of the response costs for those IAs should be allocated to Greenlease. (See FOF 414-18.)

AOC-N23

COL 129. With respect to the VOC contamination in IA 13, the Trinity plaintiffs satisfied their burden to show that 52% of the response costs for that IA should be allocated to Greenlease. (See FOF 419-24.)

AOC-N25 and AOC-N26

COL 130. With respect to the lead contamination in IAs 1a, 1c, 1f, and 1g, the Trinity plaintiffs satisfied their burden to show that 100% of the response costs for those IAs should be allocated to Greenlease. (See FOF 425-38.)

AOC-N29

COL 131. With respect to the lead contamination in IAs 6a and 6b, the Trinity plaintiffs did not satisfy their burden to show response costs for those IAs should be allocated to Greenlease. (See FOF 439-46.)

AOC-N30

COL 132. With respect to the lead contamination in IAs 12a-12f, the Trinity plaintiffs satisfied their burden to show that 86% of the response costs for those IAs should be allocated to Greenlease. (See FOF 447-55.)

AOC-N31

COL 133. With respect to the PCB contamination in IA 20, the Trinity plaintiffs did not meet their burden to show that the response costs for that IA should be allocated to Greenlease. (See FOF 456-62.)

SB-N7

COL 134. With respect to the lead contamination in IA 17, the Trinity plaintiffs met their burden to show that 100% of the response costs for that IA should be allocated to Greenlease. (See FOF 463-74.)

MW-N3 and PB-N1

COL 135. With respect to the manganese contamination in IA 14, the Trinity plaintiffs did not meet their burden to show response costs for those areas should be allocated to Greenlease. (See FOF 475-82.)

Overall Allocation of Responsibility based upon Major Remediation Activity

COL 136. The court having established percentages of responsibility for the contamination that required remediation in each IA, determined an overall allocation based upon the extent of each major remediation activity in each IA, which may be applied to the investigation, removal and remedial past costs incurred through February 2015, the general construction costs, such as, "Site Preparation & General Requirements" and "Site Closeout/Restoration Activities," and future costs for operations and maintenance at the North

Plant. (See Appendices A and B; T.T. 4/21/15 (ECF No. 341) at 31-34.) This factor includes consideration of the amount of hazardous substance involved.

COL 137. The court considered the following major remediation activities in its calculation: “Cap-In-Place, Asphalt Re-Surfacing, Metals;” “Concrete Demolition & Crushing;” “Excavate, Pre-Condition, & Off-Site Disposal, Metals;” “Excavate & On-Site Consolidation, Metals;” “Off-Site Disposal, Metals/VOCs/SVOCs;” “Excavate & Off-Site Disposal, PCBS;” “Placement of Geotextile;” “Backfill with Imported Clean Fill;” “Topsoil & Seedling;” “Placement of DGA;” and “Asphalt Capping.” (See Appendices A and B; Trinity pls. Ex. 83.)

COL 138. The Trinity plaintiffs presented to the court a chart detailing those remediation activities in each IA and the square footage or cubic yardage covered by each remediation activity. (Trinity pls. Ex. 83.)

COL 139. The court for each IA multiplied the percentage of responsibility attributable to Greenlease with the square footage or cubic yardage covered by each remediation activity. (See Appendices A and B; T.T. 4/21/15 (ECF No. 341) at 31-34.)

COL 140. The court for each IA multiplied the percentage of responsibility that was not attributable to Greenlease with the square footage or cubic yardage covered by each remediation activity. (See Appendices A and B; T.T. 4/21/15 (ECF No. 341) at 31-34.)

COL 141. The court added the results of the calculations detailed in the foregoing paragraphs and divided those sums by the total square footage and cubic yardages covered by all remediation activities at the North Plant. (See Appendices A and B; T.T. 4/21/15 (ECF No. 341) at 31-34.) The resulting numbers were each multiplied by 100 to arrive at a percentage, i.e., 83% and 17%.

COL 142. The 83% represents Greenlease's responsibility for all response costs under this factor for the cleanup at the North Plant, including responsibility investigation, removal and remedial past costs incurred through February 2015, for general construction costs, such as, "Site Preparation & General Requirements" and "Site Closeout/Restoration Activities," and *future* construction costs for ongoing operations and maintenance work. (Gormley's Updated Expert Report dated December 2014, Table 7-1 at TRINGRNL058301; Trinity pls. Ex. 83; T.T. 4/21/2015 (ECF No. 341) at 32.)

COL 143. The 17% represents the Trinity plaintiffs' responsibility for all response costs under this factor for the cleanup of the North Plant and the percentage of response costs that they did not prove was attributable to Greenlease under this factor. (Gormley's Updated Expert Report dated December 2014, Table 7-1 at TRINGRNL058301; Trinity pls. Ex. 83; T.T. 4/21/2015 (ECF No. 341) at 32.)

COL 144. The court considered additional factors in its equitable allocation of response costs for the cleanup of the North Plant, which will be discussed below. Action Mfg., 428 F.Supp.2d at 325 (quoting 42 U.S.C. § 9613(f)(1) ("The allocation of response costs in a § 113 contribution case is governed by CERCLA's broad instruction that the court 'may allocate response costs among liable parties using such equitable factors as the court determines are appropriate.'").

Response Costs Attributable to Commerce Park

COL 145. Greenlease argues that the Trinity plaintiffs incurred response costs for remediating wastes that were left at the North Plant by Commerce Park, i.e., "waste oil that had to be pumped out of underground vaults, characterized, and sent off-site for disposal and solid waste, including asbestos waste." (ECF No. 346 FOF ¶ 119.)

COL 146. According to Greenlease, “[n]either Trinity nor Mr. Gormley removed or separated out the costs that Trinity incurred to remediate waste caused by Commerce Park from the invoices and construction costs that Trinity seeks to recover from Greenlease in this case.” (ECF No. 346 ¶ 120.)

COL 147. The Trinity plaintiffs argue: (a) the Trinity plaintiffs were required to remediate the waste allegedly left behind at the North Plant by Commerce Park, pursuant to the consent order; and (b) “Greenlease did not attempt to quantify the cost associated with” remediating the waste allegedly left behind by Commerce Park. (ECF No. 347 FOF ¶¶ 274-87.)²²

COL 148. It is more likely than not that during its demolition of the North Plant, Commerce Park left waste oil and solid waste at the North Plant. (T.T. 4/23/15 (ECF No. 342) at 48-50; Trinity pls. Ex. 72 at TRINGRNL070218.)

COL 149. Beginning in the 1900s, it was customary practice to use asbestos-containing materials for building purposes. (See FOF 84) There were multiple structures at the North Plant at the time Greenlease acquired the North Plant. (Id.) From 1911 through at least 1922, Greenlease expanded the operations at the North Plant, which included constructing a number of buildings on the property. (See FOF 22.) In the 1990s—during which Trinity Industries, Inc. owned the North Plant—however, it was not customary practice to use asbestos-containing building materials. (See FOF 85.)

²² The Trinity plaintiffs also argue that—under 35 Pa. Cons. Stat. § 6020.701—the court should hold Greenlease responsible for the response costs incurred as a result of the waste left at the North Plant. As discussed above, however, the Trinity plaintiffs’ claims are contribution claims under § 9613(f)(3)(B) of the CERCLA and section 6020.705(c)(2) of the HSCA and not cost recovery claims asserted under section 6020.701.

COL 150. The Trinity plaintiffs suggest that the waste oil left by Commerce Park was caused by PCBs used during the operation of the North Plant. (ECF No. 347 ¶ 280.) There is evidence of record that Greenlease *and* Trinity Industries, Inc. used PCBs during their operations of the North Plant. (See FOF 459.) PCBs were identified as the primary contaminant in IA 20. (See FOF 458.) The PCB-contamination that required remediation in IA 20 was caused by Trinity Industries, Inc. using PCB oil to lubricate the railroad switch in the area of IA 20. (See FOF 461.) The court in its equitable allocation considered Trinity Industries, Inc.'s use of PCB oil in IA 20. (See COL 133.) Commerce Park did not conduct manufacturing operations at the North Plant, and any waste oils attributable to Commerce Park would have been left at the North Plant as part of Commerce Park's demolition activities, i.e., lubricating fluid from hydraulic presses. (T.T. 4/23/15 (ECF No. 342) at 48.)

COL 151. Gormley testified that the Trinity plaintiffs as part of the cleanup of the North Plant were required to remove "some of" the waste left behind by Commerce Park because "it was in the way" of "areas that [the Trinity plaintiffs] needed to cleanup." (T.T. 4/23/15 (ECF No. 342) at 49.) Under those circumstances, Greenlease may be equitably allocated the response costs for remediating areas that contained waste left by Commerce Park but would have needed to be remediated in any event due to the Greenlease's conduct while operating the North Plant.

COL 152. The evidence of record shows that it is more likely than not that the Trinity plaintiffs incurred response costs to:

- pump the waste oil that was left at the North Plant by Commerce Park out of a underground vault, characterize that waste oil; "send it for offsite disposal;" and clean the vaults (T.T. 4/23/15 (ECF No. 342) at 48);
- clean-up the solid waste, e.g., asbestos-containing material, that was left at the North Plant by Commerce Park, but which was more likely than not attributable

to Shelby Steel's and Greenlease's construction of buildings at the North Plant in the 1900s (*Id.* at 49); and

- retain licensed inspectors to “to determine whether there was any remaining [asbestos-containing material] at the site,” which was likely caused by Commerce Park’s demolition of buildings constructed by Shelby Steel and Greenlease that contained asbestos (*Id.* at 49-50).

COL 153. As Greenlease points out, however, the Trinity plaintiffs during trial did not specify the amount of response costs it incurred to remediate the waste left at the North Plant by Commerce Park, e.g., the amount of response costs attributable to remediating the portion of the waste left at the North Plant by Commerce Park that was not “in the way” of other waste that required remediation in any event due to Greenlease’s conduct. The Trinity plaintiffs in their response to Greenlease’s proposed findings of fact and conclusions of law specify the amount of response costs attributable to waste left at the North Plant by Commerce Park, but there is no evidence in the trial record that identifies those amounts. (ECF No. 354 ¶ 49.) Argument of counsel in this instance is not evidence upon which the court can rely to equitably allocate response costs in this case. The record does not reflect the exact amount of response costs that are attributable to Commerce Park.

COL 154. Based upon the foregoing, there is an equitable need to reduce Greenlease’s percentage of responsibility for response costs to reflect an amount attributable to Commerce Park. That reduction will be 6% under this factor.

Cooperation by the parties with federal, state, or local officials

COL 155. The Trinity plaintiffs argue this factor weighs in their favor because the consent order is evidence that they cooperated with the PaDEP and “federal mandates” to response to the contamination at the North Plant. (ECF No. 347 ¶ 105.)

COL 156. The Trinity plaintiffs also argue that Greenlease was invited to participate in the cleanup of the North Plant via a “pre-suit notice” dated June 13, 2008, that the Trinity plaintiffs sent to Greenlease, which described the contamination at the North Plant and Greenlease’s involvement in causing that contamination, and informed Greenlease that a response to the contamination would be conducted. (Trinity pls. Ex. 79.)

COL 157. In 2008, however, Greenlease’s assets consisted of an environmental reserve of \$150,000. (Greenlease Ex. G at GHC0005963; T.T. 4/23/15 (ECF No. 342) at 95.) The Trinity plaintiffs spent \$8,933,430.81 to remediate the North Plant. (Trinity pls. Ex. 81.) The evidence does not show that it is more likely than not that Greenlease—with assets of only \$150,000—could meaningfully participate in the clean-up of the North Plant after it received the pre-suit notice dated June 13, 2008.

COL 158. Based upon the foregoing, considerations of equity do not require the court to adjust the allocation of responsibility for response costs based upon the Trinity plaintiffs’ cooperation by the parties with federal, state, or local officials or Greenlease’s failure to participate in the cleanup of the North Plant.

Ability to Pay

COL 159. Greenlease argues “[t]he disparity between Trinity’s financial resources and Greenlease’s is relevant to the Court’s allocation.” (ECF No. 346 ¶ 236 (citing Central Maine Power, Co. v. V.F.J. O’Connor Co., 838 F.Supp.641 (D. Maine 1993); United States v. Coeur d’Alenes Co., 767 F.3d 873, 875-76 (9th Cir. 2014)).)

COL 160. The Trinity plaintiffs argue the court should not consider Greenlease’ alleged inability to pay because “[w]hen the record does not make clear that a party is defunct, bankrupt, uninsured, or otherwise lacking of resources, courts have declined to take ability to pay

into account in determining the equitable allocation among the parties.” (ECF No. 347 COL ¶ 117 (citing United States v. Kramer, 53 F.Supp. 592, 595 (D.N.J. 1977); United State v. Newmont USA Ltd., Civ. Action No. 05-020, 2008 WL 4621566, at *62 (E.D. Wash. Oct. 17, 2008))).²³

COL 161. As discussed above, Greenlease had limited assets at the time of the bench trial, i.e., as of April 23, 2015, there was \$92,000 in assets left in Greenlease’s estate. (T.T. 4/23/15 (ECF No. 342) at 95-96.) There, however, was evidence presented in this case that Greenlease may have insurance covering any liabilities that may result from this litigation. (T.T. 4/23/15 (ECF No. 342) at 96, 116, 126-36.) The Trinity plaintiffs, therefore, will be able to recover whatever assets Greenlease has available, including any available insurance assets applicable to the liabilities resulting from this litigation.

COL 162. Under those circumstances, the parties’ ability to pay in this case is not a factor to which the court will give weight in determining the equitable allocation of response costs in this case.

Provisions of the Purchase and Sale Agreement

Indemnity and Survival Provisions

COL 163. Greenlease argues that the court should consider the indemnity provision in the purchase and sale agreement “that allocated environmental liabilities between the parties

²³ The Trinity plaintiffs argue that “although this Court did not pierce the corporate veil and find Ampco liable, it cannot be ignored that Greenlease has upstreamed through dividends, millions of dollar that otherwise would be available to pay Greenlease’s share of liability determined here.” (ECF No. 347 COL ¶ 121.) The Trinity’s plaintiffs’ argument in this respect is not persuasive. The court granted Ampco’s motion for summary judgment because the Trinity plaintiffs failed to show by clear and convincing evidence that Greenlease was an alter ego of Ampco, and, thus, the assets of Ampco are not relevant to the court’s equitable allocation of response costs in this case. (ECF No. 235.)

for a three-year period after the sale of the North Plant, then allocated 100% of the liability to Trinity after the three-year period ended.” (ECF No. 346 ¶ 241.

COL 164. Greenlease is correct. Although the Trinity plaintiffs pursuant to the purchase and sale agreement did not waive their rights to file suit against Greenlease for contribution under CERCLA or HSCA, it would be error for the court to “eliminate[e] significant consideration of the parties’ intent in its *equitable* allocation.” Beazer, 412 F.3d at 441 (citing Kerr-McGee Chemical Corp. v. Lefton Iron & Metal Co., 4 F.3d 321, 326 (7th Cir. 1994) (“Although contractual arrangements between parties are not necessarily determinative of statutory liability, Lefton’s intent to indemnify Kerr-McGee should be considered in the allocation of cleanup costs.”)).

COL 165. The district court in Beazer agreed with the magistrate judge’s decision, which prioritized a “polluter pays” principle over the parties’ intent to shift environmental risk, which was set forth in a sales agreement between the parties. Beazer, 412 F.3d at 446.

COL 166. The district court in Beazer “found that the parties to the 1974 sale [of the subject property] intended that [the defendant] would not bear any environmental liability following the 1974 sale, but reduced [the defendant’s] equitable share by only 20% in recognition of this and related findings.” Beazer, 412 F.3d at 445-46.

COL 167. The court of appeals rejected the district court’s reasoning and explained:

[T]he “polluter pays” principle has no canonical or transcendent importance under § 9613(f)(1); it is certainly not the “primary policy” of contribution claims, as implied by the District Court. It is simply one of many factors that may or may not bear on a given equitable allocation determination. See Kerr-McGee, 14 F.3d at 326 (listing possible factors). Specifically, there is no basis in CERCLA’s text or history for prioritizing a priori the parties’ relative contributions of waste over their contractual intent to allocate environmental liability among themselves. To the contrary, CERCLA expressly authorizes private indemnity agreements, see 42 U.S.C. § 9607(e)(1); Fisher Development Co. v. Boise Cascade Corp., 37 F.3d

104, 110 (3d Cir.1994) (finding in § 107(e)(1) “a policy favoring private ordering of ultimate risk distribution”), and the District Court’s insistence on elevating relative waste contribution is fundamentally inconsistent with CERCLA’s policy of favoring private indemnity agreements.

Beazer, 412 F.3d at 446-47. The court of appeals also determined that its prior decisions did not support prioritizing the parties’ contributions of waste over their intent to allocate environmental responsibility.²⁴ Id. at 447 (noting “[a]s a matter of equity...the intent of the parties, which is manifested by their actions and in the written agreement, can be taken into account”).

COL 168. The court of appeals in Beazer held:

It is clear, then, that the District Court erred in eliminating significant consideration of the parties’ intent in its equitable allocation. See Kerr-McGee, 14 F.3d 321, 326 (“Although contractual arrangements between parties are not necessarily determinative of statutory liability, Lefton’s intent to indemnify Kerr-McGee should be considered in the allocation of cleanup costs.”). Moreover, to the extent that the court felt itself bound by the “polluter pays” principle or by our oblique reference to that principle in Beazer I, that conclusion was unwarranted. Because we conclude that the District Court’s ultimate allocation of Beazer’s costs was predicated in large part on this error, that conclusion was an abuse of discretion.

Beazer, 412 F.3d at 448-49.

COL 169. Greenlease, pursuant to the indemnity of seller clause in the purchase and sale agreement, agreed “to indemnify and hold harmless” Trinity Industries, Inc. for “any loss, claim, damage,” etc. arising out of any obligation or liability of Greenlease. (Trinity pls. Ex. 67

²⁴ This court identified the cause of contamination at the North Plant as the most critical factor in its equitable allocation because the majority of the evidence presented at trial and the arguments of the parties concerned which party or other entity that is not a party in this case caused the contamination in the IAs identified by Golder. The court’s rationale is not based upon a “polluter pays” principle; rather, the court’s emphasis on the cause of contamination is based upon the plethora of evidence presented by the parties about the historical operations of the North Plant and how those operations contributed to the response costs incurred by the Trinity plaintiffs during the cleanup of the North Plant.

at TRINGRNL032346-47; T.T. 4/23/15 (ECF No. 342) at 101.) The indemnity of seller clause expired three years after the date of the contract. (T.T. 4/23/15 (ECF No. 342) at 101.) In other words, if Trinity Industries, Inc. discovered a liability attributable to Greenlease at the North Plant more than three years after the date of the purchase and sale agreement, Greenlease did not have an obligation to indemnify under the purchase and sale agreement Trinity Industries, Inc. for that liability.

COL 170. To the extent Greenlease wanted to be relieved of all possible environmental liabilities at the North Plant, i.e., for the Trinity plaintiffs to waive its rights to seek contribution from Greenlease under the CERCLA or the HSCA, it could have bargained with Trinity Industries, Inc. for such a provision in the purchase and sale agreement. Based upon the evidence of record, Greenlease and Trinity Industries, Inc. were corporations with equal bargaining power at the time they entered into the purchase and sale agreement. Greenlease did not include in the purchase and sale agreement an “as is, where is” clause and Trinity Industries, Inc. did not otherwise waive its right to seek contribution under the CERCLA or the HSCA from Greenlease.

COL 171. Based upon the parties’ intent as set forth in the purchase and sale agreement, however, Greenlease does not have an obligation to indemnify Trinity Industries, Inc. for any liabilities attributable to Greenlease that Trinity Industries, Inc. discovered more than three years after the date of closing. There is no evidence of record that Trinity Industries, Inc. was required to agree to the three-year survival clause with respect to the indemnity provisions, i.e., Trinity Industries, Inc. as a party with bargaining power equal to that of Greenlease and could have negotiated other terms more favorable to itself as part of the purchase and sale agreement.

COL 172. Based upon the foregoing, the court, after giving the indemnity provision set forth in the purchase and sale agreement *significant* consideration, will afford *some* minimal weight to the parties' intent in the purchase and sale agreement that—more than three years following the date of closing—Greenlease would not have any obligation to indemnify Trinity Industries, Inc. for any liability attributable to Greenlease. Greenlease's percentage of responsibility for response costs will be reduced by 5% under this factor.

The Alleged Discounted Sales Price

COL 173. Greenlease also argues that "Trinity received a discount for the environmental condition of the property" when it purchased the North Plant from Greenlease. (ECF No. 346 ¶ 242.)

COL 174. The evidence presented, however, does not show that it is more likely than not that Greenlease sold the North Plant to Trinity Industries, Inc. at a discounted price for three reasons.

COL 175. First, the court cannot discern based upon the evidence of record whether the price Trinity Industries, Inc. paid for Greenlease's inventory and property, plant, and equipment was a "discounted price" because there was no evidence presented with respect to the fair market value of the inventory and property, plant, and equipment that Trinity Industries, Inc. purchased from Greenlease.

COL 176. The evidence presented by Hoover about Greenlease's assets at the close of 1985 was based upon Greenlease's balance sheets. "[B]alance sheets reflect the book value of assets, which is usually the cost of the asset reduced by any depreciation." Zeta Consumer Prods. Corp. v. Equistar Chem. L.P. (In re Zeta Consumer Prods. Corp.), 291 B.R. 336, 347 (D.N.J.

2003). “Book value ordinarily does not reflect the true market value of the asset.” Id. (citing Lawson v. Ford Motor Co. (In re Roblin Indus., Inc.), 78 F.3d 30, 36 (2d Cir. 1996)).

COL 177. “Book value” is defined as: “[t]he value at which an asset is carried on a balance sheet.” *Book value*, BLACK’S LAW DICTIONARY (10th ed. 2014). “Fair market value” is defined as: “[t]he price that a seller is willing to accept and a buyer is willing to pay on the open market and in an arm’s-length transaction; the point at which supply and demand intersect.” *Value, fair market value*, BLACK’S LAW DICTIONARY (10th ed. 2014).

COL 178. “[T]he market value of particular property may of course differ substantially from its book value, and the market value of certain ... assets may [be] greater or less than their book value.” Lawson, 78 F.3d at 36 (citing United States Lines (S.A.), Inc. v. United States (In re McLean Indus., Inc.), 132 B.R. 247, 258 (S.D.N.Y. 1991); DeRosa v. Buildex Inc. (In re F & S Cent. Mfg. Corp.), 53 B.R. 842, 849 (E.D.N.Y. 1985)); In re Herchingner Inv. Co. of Del., Inc., 278 F. Appx 125, 129 (3d Cir. 2008) (“It is certainly true that there can be a substantial disconnect between book value and fair market value”).

COL 179. The court cannot, therefore, compare how the fair market value of the inventory and property, plant and equipment Trinity Industries, Inc. purchased from Greenlease compares to the actual price Trinity Industries, Inc. paid for those items, i.e., whether Trinity Industries, Inc. purchased Greenlease’s inventory and property, plant, and equipment for a price that is lower than the fair market value of those assets.

Value of the North Plant after Remediation

COL 180. The court in its equitable allocation may consider evidence that the value of the North Plant appreciated following remediation. Minyard, 184 F.3d at 387 (ordering the

magistrate judge on remand to consider, among other equitable factors, “the fact that the Property may appreciate following its remediation”).

COL 181. Prior to the remediation performed by Golder on behalf of the Trinity plaintiffs, the North Plant could not safely be reused to erect a structure or for any type of industrial activity. (T.T. 4/21/2015 (ECF No. 341) at 82-83.)

COL 182. The parties agree that as a result of the Trinity plaintiffs’ remediation of the North Plant, the North Plant is suitable for reuse; indeed, a “big box store” such as a Home Depot could be developed at the North Plant. (T.T. 4/21/2015 (ECF No. 341) at 84.)

COL 183. The evidence of record shows, therefore, that it is more likely than not that the value of the North Plant increased because of the Trinity plaintiffs’ remediation of the property. Under those circumstances, the Trinity plaintiffs benefited from the remediation of the property because it increased the value of the property and made it eligible for reuse and resale. The increase in value of the North Plant in equity warrants a decrease of 10% of Greenlease’s percentage of responsibility for the response costs for the remediation.

Final Percentage Allocation

COL 184. Greenlease’s percentage of responsibility for response costs is: (a) 83% (attributed to Greenlease for causing contamination at the North Plant), less (b) 6% (in consideration of the response costs incurred with respect to waste left at the North Plant by Commerce Park), less (c) 5% (in consideration of the indemnity and survival provisions of the purchase and sale agreement), less (d) 10% (in consideration of the increase in value of the North Plant as a result of the cleanup), for a final percentage allocation of 62% to Greenlease for response costs incurred by the Trinity plaintiffs for the cleanup of the North Plant.

COL 185. The final percentage allocation of 62% to Greenlease shall be—subject to the limitations set forth in this opinion—applied to all response costs incurred by the Trinity plaintiffs for the cleanup at the North Plant, including responsibility for general construction costs, such as, “Site Preparation & General Requirements” and “Site Closeout/Restoration Activities,” and *future* construction costs for ongoing operations and maintenance work. (Gormley’s Updated Expert Report dated December 2014, Table 7-1 at TRINGRNL058301; Trinity pls. Ex. 83; (T.T. 4/21/2015 (ECF No. 341) at 32.)

Prejudgment Interest

COL 186. The Trinity plaintiffs request an award of prejudgment interest.

COL 187. “An award of prejudgment interest is authorized under both CERCLA and the HSCA.” Action Mfg., 428 F.Supp.2d at 332-33.

COL 188. An award of prejudgment interest, however, is not mandatory under those provisions. Caldwell Trucking PRP v. Rexon Tech. Corp., 421 F.3d 234, 247 (3d Cir. 2005).

COL 189. “The argument for awarding prejudgment interest lies in the view that when a plaintiff has been denied the use of an ascertainable amount of money for a period of time, there is an actual loss.” Caldwell Trucking, 421 F.3d at 247.

COL 190. Section 107(a) of the CERCLA “identifies two events, the later of which will trigger the accrual of interest[,] i.e., “the date upon which payment of a specified amount is demanded in writing, or the date of the expenditure at issue.” AlliedSignal, Inc. v. Amcast Int’l Corp., 177 F.Supp.2d 713, 758 (S.D. Ohio 2001); 42 U.S.C. § 9607(a)(4).

COL 191. The Trinity plaintiffs in the complaint sought to recover response costs from Greenlease. (ECF No. 1 at 11, 18.) They did not, however, request a “specified amount” of response costs. (Id.; 42 U.S.C. § 9607(a)(4).) A complaint that does not specify an amount of

response costs will not constitute a demand in writing of a specified amount, which is required to begin the accrual of prejudgment interest. Colorado v. United States, 867 F.Supp. 948, 950 (D. Colo. 1994) (Section 90607(a)(4) “clearly requires a written demand for specified response costs. Thus, a majority of courts have concluded that the plaintiff must present the defendant a demand in the form of a dollar amount.”).

COL 192. There is evidence of record, however, that on March 19, 2009, the Trinity plaintiffs provided to Greenlease a “Rule 26(a)(1)(A)(iii) ‘Computation of Damages,’” which provided that the Trinity plaintiffs incurred “\$499,059.28 related to investigative, response, or remedial work at the subject property.” (ECF No. 280-1 at 1-2.)

COL 193. The Rule 26(a)(1)(A)(iii) computation of damages dated March 19, 2009, together with the complaint satisfied the requirement of a written demand for a specified amount. Prejudgment interest, therefore, began to accrue on \$499,059.28 of the Trinity plaintiffs’ response costs on March 19, 2009. With respect to the remaining \$8,494,971.53 in response costs incurred by the Trinity plaintiffs after that date, prejudgment interest began to accrue on the dates on which each such cost was incurred. 42 U.S.C. § 9607(a)(4).

COL 194. “The rate of interest on the outstanding unpaid balance of the amounts recoverable under this section shall be the same rate as is specified for interest on investments of the Hazardous Substance Superfund established under subchapter A of chapter 98 of Title 26.” 42 U.S.C. § 9607(a); 26 U.S.C. § 9507(d)(3)(C);²⁵ AmeriPride Servs., Inc. v. Valley Indus.

²⁵ Section 9507(d)(3)(C) provides:

Interest on advances made to the Superfund shall be at a rate determined by the Secretary of the Treasury (as of the close of the calendar month preceding the month in which the advance is made) to be equal to the current average market yield on outstanding marketable obligations of the United States with remaining

Serv., Inc., Civ. Action No. 00-113, 2012 WL 1143658, at *6 (E.D. Cal. Apr. 4, 2012) (“To roughly address this fact, the court will order defendant to also pay interest in amounts calculated in accordance with 42 U.S.C. § 9607 (incorporating the interest rate calculation provided in 26 U.S.C. § 9507(d)(3)(C)).”).

COL 195. Greenlease argues that the Trinity plaintiffs “failed to put into evidence the information that would allow the Court (or Greenlease) to assess Trinity’s interest claim.” (ECF No. 346 at 43.)

COL 196. The Court of Appeals for the Tenth Circuit has explained: “because interest determinations are compounded calculations, it may be impossible for parties to provide accurate calculations prior to the court’s allocation of response cost liability. In such instances, parties may submit their interest calculations to the court subsequent to that finding.” Bancamerica Commercial Corp. v. Mosher Steel of Kansas, Inc., 100 F.3d 792, 802 (10th Cir. 1996).

COL 197. The Trinity plaintiffs shall, therefore, meet and confer with Greenlease about the appropriate prejudgment interest calculation in this case using the interest rate calculation provided in 26 U.S.C. § 9507(d)(3)(C), and no later than thirty days after the entry of the order accompanying this opinion file with the court their interest calculation.

Litigation Costs other than Attorneys’ Fees

COL 198. The Trinity plaintiffs—as the prevailing party in this case—seek litigation costs from Greenlease, under Federal Rule of Civil Procedure 54. (ECF No. 347 COL ¶ 191.)

periods to maturity comparable to the anticipated period during which the advance will be outstanding and shall be compounded annually.

26 U.S.C. § 9507(d)(3)(C).

COL 199. Rule 54 provides:

(1) Costs Other Than Attorney's Fees. Unless a federal statute, these rules, or a court order provides otherwise, costs--other than attorney's fees--should be allowed to the prevailing party. But costs against the United States, its officers, and its agencies may be imposed only to the extent allowed by law. The clerk may tax costs on 14 days' notice. On motion served within the next 7 days, the court may review the clerk's action.

FED. R. CIV. P. 54(d)(1).

COL 200. "Generally speaking, a prevailing party is one who 'succeed[s] on any significant issue in litigation which achieves some of the benefit the parties sought in bringing suit.'" D.F. v. Collingswood Borough Bd. of Educ., 694 F.3d 488, 501 (3d Cir. 2012) (quoting J.O. ex rel. C.O. v. Orange Twp. Bd. of Educ., 87 F.3d 267, 271 (3d Cir. 2002)). A two-prong test is applied to determine whether a party is a prevailing party: "First, 'whether plaintiffs achieved relief,' and second, 'whether there is a causal connection between the litigation and the relief from the defendant.'" D.F., 694 F.3d at 501 (quoting J.O., 87 F.3d at 271).

COL 201. Here, the Trinity plaintiffs are a prevailing party. They established Greenlease's liability for contribution under 42 U.S.C. § 9613(f)(3)(B) and 35 PA. CONS. STAT. § 6020.702 and proved that Greenlease should be allocated 62% of the response costs incurred and will be incurred in the cleanup of the North Plant. The relief sought by the plaintiffs in this case, i.e., contribution for the responses costs incurred already and which will be incurred in remediating the North Plant, will be ordered as a result of this litigation.

COL 202. The Trinity plaintiffs are, therefore, entitled to litigation costs other than attorneys' fees under Rule 54(d)(1). The Trinity plaintiffs may recover from Greenlease 62% of their litigation costs, which reflects the equitable allocation of responsibility for the response costs for the cleanup of the North Plant, which caused this litigation. 10 CHARLES A. WRIGHT,

ARTHUR R. MILLER & MARY KAY KANE, FEDERAL PRACTICE AND PROCEDURE § 2667 (4th ed. 2014) (“In some cases...the court will apportion costs among the parties or reduce the size of the prevailing party’s award to reflect...partial success.”).

IV. Conclusion

For the reasons stated herein, 62% of the response costs incurred by the Trinity plaintiffs at the North Plant and 62% of the future costs for the operations and maintenance of the North Plant are allocated to Greenlease.

The Trinity plaintiffs are entitled to prejudgment interest at the rate set forth in 42 U.S.C. § 9607(a)(4), which incorporates the interest rate calculation set forth in 26 U.S.C. § 9507(d)(3)(C). The Trinity plaintiffs shall meet and confer with Greenlease to establish the appropriate calculation of prejudgment interest in this case and no later than thirty days of the entry of the accompanying order file with the court their interest calculation.

Greenlease shall pay 62% of the Trinity plaintiffs’ litigation costs other than attorneys’ fees, pursuant to Federal Rule of Civil Procedure 54(d)(1).

Greenlease’s motion to strike (ECF No. 359) will be denied as moot for the reasons stated herein.

An appropriate order will be entered.

BY THE COURT,

Dated: March 28, 2016

/s/ JOY FLOWERS CONTI
Joy Flowers Conti
Chief United States District Judge

Appendices A and B attached.

APPENDIX A—Major Remediation Activities for Each IA

| A | B | C | D | E | F | G | H | I | J | K | L | M |
|------------------------------|---|---|-------------------------------------|---|---|--|---|------------------------------|--|------------------------|-----------------------|----------------------|
| Major Remediation Activities | | | | | | | | | | | | |
| Impact Areas | Selected Response Action | Cap in place; Asphalt Resurfacing-Metals (SF) | Concrete Demolition & Crushing (SF) | Excavate, Pre-Condition, & Off-Site Disposal, Metals (CY) | Excavate & On-site Consolidation, Metals (CY) | Off-Site Disposal, Metals/VOCs/SV OCs (CY) | Excavate & Off-Site Disposal, PCBs (CY) | Placement of Geotextile (SF) | Backfill with Imported Clean Fill (SF) | Topsoil & Seeding (SF) | Placement of DGA (SF) | Asphalt Capping (SF) |
| 1A | Cap in Place | 22,358 | | | | | | | | | | |
| 1B | Pre-Condition and off-site disposal | | 3,514 | 260 | | | | | | | 3,514 | 3,514 |
| 1C | Pre-Condition and off-site disposal | | 62,737 | 6,971 | | | | | | | 62,737 | 62,737 |
| 1D | Cap in Place | 2,487 | | | | | | | | | | |
| 1E | Pre-Condition and off-site disposal | | | 1,145 | | | | 3,865 | | | 3,865 | 3,865 |
| 1F | Excavate and off-Site disposal | | | | | 141 | | 1,907 | 141 | 1,907 | | |
| 1G | Excavate and off-Site disposal | | | | | 1,694 | | | | | 15,242 | 15,242 |
| 2A | Cap in Place | 3,400 | | | | | | | | | | |
| 2B | Pre-Condition and off-site disposal; Excavate and off-Site Disposal | | 12,253 | 928 | | | | | | | 12,253 | 12,253 |
| 3A | Cap in Place | 28,382 | | | | | | | | | | |
| 3B | Pre-Condition and off-Site disposal | | | 701 | | | | 2,769 | | | 2,769 | 2,769 |
| 3C | Pre-Condition and off-Site disposal | | 50,048 | 4,297 | | | | | | | 50,048 | 50,048 |
| 3D | Pre-Condition and off-Site disposal | 4,037 | | | | | | | | | | |
| 4A | Pre-Condition and off-site disposal; Excavate and off-Site Disposal | | 5,800 | 447 | | | | | 447 | | 5,800 | |
| 4B | Cap in Place | | | | | | | | | | | |
| 5 | Cap in Place | | | | | | | | | | | |
| 6A | Excavate and off-Site disposal | | 2,053 | | | 152 | | | 152 | | 2,053 | |
| 6B | Pre-Condition and off-Site disposal; Excavate and off-Site Disposal | | | 164 | | | | | 164 | 2,211 | | |
| 7 | Excavate and relocate on-Site | | | | 77 | | | | 77 | 964 | | |
| 8A | Excavate and off-Site disposal | | 18,240 | 1,351 | | | | | 1,351 | 18,240 | | |
| 8B | Excavate and off-Site disposal | | 4,506 | | | 748 | | 4,506 | 748 | 4,506 | | |
| 8C | Excavate and off-Site disposal | | 4,505 | | | 747 | | 4,505 | 747 | 4,505 | | |
| 8D | Excavate and off-Site disposal | | 767 | | 57 | | | | 57 | 767 | | |
| 9A | Excavate and off-Site disposal | | 5,009 | | | 384 | | | 384 | | 5,009 | |
| 9B | Excavate and off-Site disposal | | 448 | | | 66 | | | 66 | | 448 | |
| 9C | Excavate and off-Site disposal | | 373 | | | 111 | | 373 | 111 | | 373 | |
| 10A | Excavate and relocate on-Site | | | | 378 | | | | 378 | 4,121 | | |
| 10B | Pre-Condition and off-Site disposal | | | 429 | | | | | 429 | 4,157 | | |
| 10C | Excavate and relocate on-Site | | | | 2,884 | | | 16,290 | 2,884 | 16,290 | | |
| 10D | Excavate and off-Site disposal | | | | | 2,028 | | | 2,028 | 12,383 | | |
| 11 | Excavate and relocate on-Site | | | | 405 | | | | 405 | 5,469 | | |
| 12A | Excavate and off-Site disposal | | | | | 2,274 | | 19,177 | 2,274 | 19,177 | | |
| 12B | Excavate and relocate on-Site | | | | 620 | | | | 620 | 8,123 | | |
| 12C | Excavate and off-Site disposal | | | | | 1,494 | | | 1,494 | 6,664 | | |
| 12D | Excavate and relocate on-Site | | | | 418 | | | | 418 | 2,462 | | |
| 12E | Excavate and off-Site disposal | | | | | 695 | | | 695 | 6,034 | | |
| 12F | Excavate and off-Site disposal | | | | | 682 | | | 682 | 10,972 | | |
| 13 | Excavate and off-Site disposal | | | | | 436 | | 1,470 | 436 | 1,470 | | |
| 14 | Excavate and relocate on-Site | | | | 272 | | | | 272 | 2,936 | | |
| 15 | Excavate and relocate on-Site | | | | 43 | | | | 43 | 586 | | |
| 16 | Excavate and off-Site disposal | | 267 | | | 20 | | | 20 | 267 | | |
| 17 | Excavate and relocate on-Site | | | | 181 | | | | 181 | 2,445 | | |
| 18 | Excavate and off-Site disposal | | 451 | | | 33 | | 451 | 33 | | 451 | |
| 19 | Excavate and relocate on-Site | | | | 136 | | | 915 | 136 | 915 | | |
| 20 | Excavate and off-Site disposal | | | | | | 38 | 517 | 38 | 517 | | |

Appendix 1

APPENDIX B—Calculation of Overall Allocation of Responsibility based upon Major Remediation Activities

| | | <u>Percent Allocation</u> | | | |
|-----------------|--------------------|---------------------------|---|---|-------------------------------------|
| Impact Areas | Trinity plaintiffs | Greenlease | Subtotal for Major Remediation Activities in each IA* | Amount Attributable to Trinity plaintiffs** | Amount Attributable to Greenlease** |
| 1A | 0 | 100 | 22,358 | 0 | 22,358 |
| 1B | 0 | 100 | 10,802 | 0 | 10,802 |
| 1C | 0 | 100 | 195,182 | 0 | 195,182 |
| 1D | 0 | 100 | 2,487 | 0 | 2,487 |
| 1E | 100 | 0 | 12,740 | 12,740 | 0 |
| 1F | 0 | 100 | 4,096 | 0 | 4,096 |
| 1G | 0 | 100 | 32,178 | 0 | 32,178 |
| 2A | 0 | 100 | 3,400 | 0 | 3,400 |
| 2B | 0 | 100 | 37,687 | 0 | 37,687 |
| 3A | 0 | 100 | 28,382 | 0 | 28,382 |
| 3B | 0 | 100 | 9,008 | 0 | 9,008 |
| 3C | 0 | 100 | 154,441 | 0 | 154,441 |
| 3D | 0 | 100 | 4,037 | 0 | 4,037 |
| 4A | 100 | 0 | 12,494 | 12,494 | 0 |
| 4B | 100 | 0 | 0 | 0 | 0 |
| 5 | 100 | 0 | 0 | 0 | 0 |
| 6A | 100 | 0 | 4,410 | 4,410 | 0 |
| 6B | 100 | 0 | 2,539 | 2,539 | 0 |
| 7 | 0 | 100 | 1,118 | 0 | 1,118 |
| 8A | 100 | 0 | 39,182 | 39,182 | 0 |
| 8B | 3 | 97 | 15,014 | 450.42 | 14,563.58 |
| 8C | 3 | 97 | 15,009 | 450.27 | 14,558.73 |
| 8D | 100 | 0 | 1,648 | 1,648 | 0 |
| 9A | 0 | 100 | 10,786 | 0 | 10,786 |
| 9B | 0 | 100 | 1,028 | 0 | 1,028 |
| 9C | 0 | 100 | 1,341 | 0 | 1,341 |
| 10A | 50 | 50 | 4,877 | 2,438.50 | 2,438.50 |
| 10B | 50 | 50 | 5,015 | 2,507.50 | 2,507.50 |
| 10C | 50 | 50 | 38,348 | 19,174 | 19,174 |
| 10D | 50 | 50 | 16,439 | 8,219.50 | 8,219.50 |
| 11 | 50 | 50 | 6,279 | 3,139.50 | 3,139.50 |
| 12A | 14 | 86 | 42,902 | 6,006.28 | 36,895.72 |
| 12B | 14 | 86 | 9,363 | 1,310.82 | 8,052.18 |
| 12C | 14 | 86 | 9,652 | 1,351.28 | 8,300.72 |
| 12D | 14 | 86 | 3,298 | 461.72 | 2,836.28 |
| 12E | 14 | 86 | 7,424 | 1,039.36 | 6,384.64 |
| 12F | 14 | 86 | 12,336 | 1,727.04 | 10,608.96 |
| 13 | 48 | 52 | 3,812 | 1,829.76 | 1,982.24 |
| 14 | 100 | 0 | 3,480 | 3,480 | 0 |
| 15 | 100 | 0 | 672 | 672 | 0 |
| 16 | 100 | 0 | 574 | 574 | 0 |
| 17 | 0 | 100 | 2,807 | 0 | 2,807 |
| 18 | 100 | 0 | 1,419 | 1,419 | 0 |
| 19 | 100 | 0 | 2,102 | 2,102 | 0 |
| 20 | 100 | 0 | 1,110 | 1,110 | 0 |
| Subtotal | 17%*** | 83%*** | 793,276 | 132,475.95 | 660,800.05 |

* The subtotals in this column represent the sum of columns C through M for each IA in the chart in Appendix A.

** The figures listed in these columns were derived by multiplying the percent allocations for each party for each IA listed in this chart by the subtotal for major remediation activities for each IA listed in this chart.

*** These percentages were derived by dividing the total amount of soil attributable to each party, i.e., 132,475.95 for the Trinity plaintiffs and 660,800.05 for Greenlease, by the subtotal of major remediation activities for the North Plant, i.e., 793,276, and multiplying that number by 100 to obtain an overall allocation percentage. The parties in their proposed allocations rounded their overall percent allocations to the nearest whole number. The court likewise rounded these percentages to the nearest whole number.